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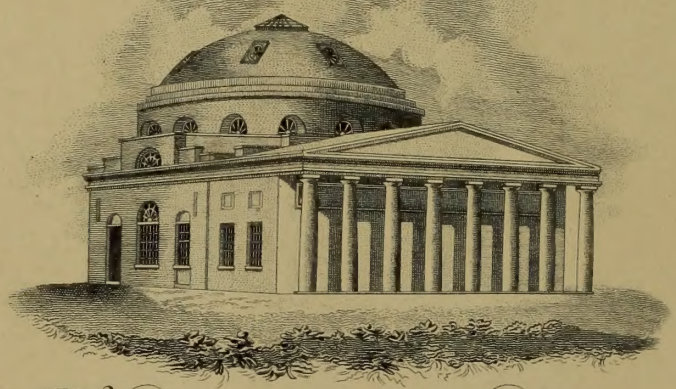

University of Maryland

Md.
Coll.

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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UNIVERSITY OF MARYLAND

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HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

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UNIVERSITY OF MARYLAND

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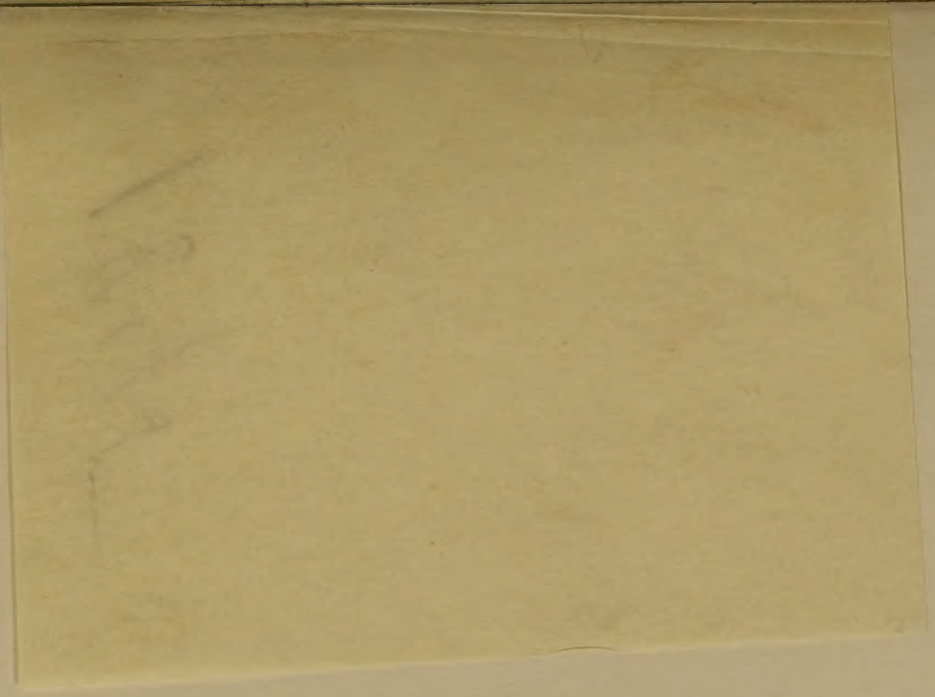

Spelling bad

An

Inaugural dissertation

on

Acute Gastritis

Submitted to the examination

of the

Hoost. Regents and Faculty of Physic

of the

University of Maryland

for the degree

of

Doctor of Medicine

by

Augustus T. Rove

of

Baltimore

Febuary

1845

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To the faculty of the University of Maryland This dissertation is most respectfully inscribed; which I hope will be received as an expression of gratitude felt by one of the class for the very profitable, instructive and intelectual course of lectures bring delivered -

You have gentlemen from me, my warmest wishes for the prosperity of the institution now under your charge, an institution that has stood preeminent in Medical literature and I have no doubt will continue so long as the same harmony exists as does at the present time - May your labours be crowned with success and may the genious of another Godman Lake be inspired, and receive a wing to soar among the highest stars of Medical learning by your teachings - Also allow me to ask of you affectionately, to remember that Being who is the only dispenser of "every good and perfect gift" - and the fountain of knowledge and he will reward with an inheritance more rich than worldly honours one that "is" incorruptible, undefiled and that fadeth not away" - Yours affectionately A S Grover -

Remarks on Acute Gastritis

It is to a spirit of inquiry that the advancement of Medical skill is indebted for the present light thrown upon the relations, the nature, the location and the treatment of disease, coming under the immediate observation of those who may justly be considered, the philanthropists of society. Guided as we are by numerous Post Mortem Examinations that have already been made; seeing them coincide with certain physical signs and demonstrations; we are not at the same loss to find leading diagnostic marks, or to form good, and rational conclusions, as when the science of Medicine remained, as it were, in embryo. Not like those venerate of Antiquity, who have long since been "gathered to the home of their fathers", as we grope our way through the dark labyrinths and intricate mazes of a classical Symptomatology fighting the quixotic shadows of numerous Theories; but we look at once for the primative location of disease by tracing effect to cause; scrutinizing and combining such symptoms as are calculated to enlighten our minds on the subject under our consideration. Truth as relates

to disease, may be justly considered as the great sun around which the medical world must revolve; and its brilliancy and importance can only be appreciated by those who willingly expose themselves to its light. Thus, we may say the Pathological inquirer with his scalpel in hand, Tracing the ravages of disease after death, has lead to as many importante discoveries in the treatment of disease, as the Philosopher Franklin with his electric kite, in electrical science - And how truly may we assert, that, if the vile genious of Bigotry had not found a path for its poisonous lead, happy would it have been for medical literature - happy would it have been for millions of our race - a brighter day would have been ours of the 19th century; and the many things that we now see so imperfectly, would be exposed by the fullness of light. But I, however, these clouds are peping away, and as a brighter sky hangs over us, a holier genious shall inspire the medical man, and awake him to the more enobling virtues of his art, that, it is the sufferings of a fellow being, like ourselves, that he is called upon to relieve -

Intestinal diseases have probably elicited as much warm discussion as any one topic connected with medical nomenclature. The theories of the past, and those of the present generation have been put forth, by their zealous advocates, with as much boldness, as certainty of success to meet with the severe analization of learned criticism. Like an adventure, tossed on Oceans wave they long to see the distant Island which has been the green spot of every dream, - the home of every thought - the port of enamoured fancy, but alas! "when tis won, tis lost"! But it is from the impetus that such give to the power of research, that has urged on the activity of intelect, and has given to the world such rich treasures as the observations and demonstrations of Louis and Andral - names that times most distant period shall recal & revue -; names that must live as long as Pathology finds a place in the progress of medical learning. And where may I ask is the name of the immortal Broussais? Stereotyped on the anals of Mecal literature? Adorned with the evergreens that hang so decorously over the crown of Pathological Science? Or lost amid the ruins of his finished superstructure, - that he based upon the "fabric of a vission"? He saw the star of future greatness as it arose, but in the

mastrings of its course his bewildered mind seized on Ignus Fatuous which led him astray - Still he directed the inquirer, he gave the impulse to search for the truth of intestinal disease to give character to that Effect which he attributed to be the Cause of disease -

The subject chosen for a few remarks is Acute Gastritis. As its name indicates, it is an inflammation of the internal of the stomach, which may attack the stomach suddenly whilst its coats are in a healthy condition, or be propagated into existence by frequent causes from a chronic disease of that organ. A moments consideration will point out to us the importance of studly attending to any diseased condition of this organ. If we reflect that it is by the facility of the powers of this viscus, we attempt to control disease in other parts of the body; and that it is the medium that nature makes use of, to sustain animal life, we are led immediately to reflect upon its great liability of becoming the seat of the most urgent, as well the most troublesome affections which we are called upon to treat - I may say that there is no organ -

in the ~~xxx xxx~~ constitution of the human subject, that has placed ~~now~~ at defiance the skill and judgment of the most learned and experienced of the art. If we examine the arrangment, and structure of the different coats of the stomach, we are shown conclusively its interest as connected with vital action: and how well adapted every part is made equal to the performance of that action. In its muscular coat we see a distribution of fibers, giving evidence at least to the power observed in its contractions and all other Phisiological acts connected with it. Whilst in the interior we have a beautiful mucous membrane, which with is folds and its villi, exhaling and secreting an albuminous fluid, explains its own peculiar purpose. We also find it more abundantly supplied with bloodvessels and nerves than any other organ in the body. This outline then leads us to this fact: it is only by a knowledge of the phisiological conditions of this organ, that the medical observer can form a correct opinion of its changes to a Pathological condition. For instance, in the healthy stomach during the

process of digestion we find its vascularity much increased, but which is simply a Physiological act, and gives rise to no derangements of general system; Should, however the Stomach be in a diseased condition, this increased vascularity would inevitably lead to the process of inflamation - hence we learn the importance of regulating the diet of such as labour under Gastritis in any of its forms, and are shown the cause why a simple derangment of the functional powers of this organ is tortured into the most forms of Organic lesions -

Some interesting facts are adduced from the sympathetic relations which the Stomach bears to other parts in disease, and those which arise when it alone is the affected organ - Thus, there are many cases that must necessarily come under the immediate notice of any practitioner of medicine, which almost every systematic symptom would refer to disease of the Stomach, and after death when examination find it healthy and a disease elsewhere situated, being only acted on sympathetically Indeed we may have all the symptoms of an

inflamatory condition of the Stomach, and the most careful observer may feel that he is safe in directing all his medical agents to effect a cure of what he considered to be a disease of the Stomach but the failure of all his usual skill, can only be revealed when the dissecting knife exposes his error. Such cases, of course, we would not pretend to say are common among those who call themselves scientific, but even with them, errors are sometimes found. Abercrombie gives the case of a Lady who had all the principle pathognomonic symptoms of Gastric disease, when upon examination after death no disease could be detected in the Stomach, and all these symptoms could be referred to some enlarged glands behind the Stomach. Which of course accounted for all the suffering of the patient. Other cases we might cite which have been reported, and which plainly demonstrate, that the sensibility of this Organ being in a State of derangement may give rise to such Symptoms as are peculiar to an inflamation

elsewhere situated - were we disposed to enter too
to detail, abundant proof is afforded us which throws
the best possible light on the importance of sympath-
tic relations of the Stomach as found in disease -
Bring led to consider the Stomach as one of those organs
upon as it were the influence of all others, surrounded
by innumerable dependencies, the fountain ~~from~~
which is first in supplying the center of circulation
that every part of the system may harmoniously
perform its own peculiar functions, and sympa-
thising too with every morbid change, we might with
propriety assent in the language of Hunter that
it is the centre of Sympathies -

Acute Gastritis appearing as an Idiopathic affection, may
be said, to be of rare occurrence - Both extremes have been
reached by the best Pathologists in endeavouring to establish
their Theories in Gastro Intestinal disease - After Broussais
had directed the minds of medical observers to this
point, as being the center of inflamation, and the great
sine qua non of all diseases, his followers considered Acute
Gastritis as a very frequent disease - But soon research brought

about a reaction in opinion, and then Acute Gastritis was only known as an inflamation uncertain, and was not met with except in cases produced by the action of Corosive poisons -

Dr. Watson states that he has never seen a case of Acute Gastritis in the idiopathic form - But Acute Gastritis from swallowing corosive poisons he has frequently seen Doct. Roberts says that it is extremely rare! and unlike other important viscera, it is much less liable to become the seat of violents inflamation, or be attacked by it, as an idiopathic affection; and that it is from the violent symptoms caused by corosive poisons, that our information is drawn relative to the violent form of Acute Gastritis.

In Louis detail of 6000 cases, and 500 dissections he did not meet with a single case of Fatal Idiopathic Gastritis - In Andral's full an concise accounts of diseases, he adverts to cases in which the primative location of disease might be traced to an Acute Inflamation of the Stomach - In right Cases recorded by him we can find sufficient to justify us on coming to some good conclusions on This

important subjects. We have not the least doubt existing on our minds in regard to Acute Gastritis appearing as an idiopathic disease, but at the same time we believe that it is most frequently seen as the effect of poisonous agents, acting, either directly, or indirectly on the stomach.

The Symptoms of Acute Gastritis as generally observed are intense thirst, desire for cold acidulated drinks, constant nausea & vomiting, pain and a burning sensation of heat about the Stomach, - fever, which is at first inflammatory, but soon becomes of a typhoid character; - pulse is at first generally small, but hard and tense; - some tension of the upper part of the abdomen; - a smooth, shining, pointed and tremulous tongue; - hiccup, respiration quick and hurried; - heart excited, - bronchitic cough, general restlessness, - and in the last stage - the features become contracted, skin cool and pale, extremities sink below the natural temperature, - pulse is borne without complaint, the vomiting is changed for regurgitation, and low delirium closes the existence of life. - Dr Stokes mentions another symptom

which is frequently seen - an incapability of swallowing - which causes the patient to call on the Medical attendant for an emetic to relieve his sufferings. This he says is caused by a spasmodic stricture of the Oesophagus and Cardiac orifice of the Stomach. He also mentions hematemesis and delirium tremens accompanying acute Gastritis. Thus, it would seem that we are not at a loss for Symptoms to guide us in diagnosing this disease; and still how frequently is it the case, that the best Medical observer is lost though surrounded by many of them.

If we examine more particularly into the Symptoms of acute Gastritis we shall find many of those that have been considered as truly pathognomonic to lead us into serious error. The Medical world at this age is full of light on this subject. We have before us the grand researches of an Andral, a Louis, a Stokes, and a host of others, who have made the Post Mortem. The only

sure test of diagnosis and who have not "hid their light under a bushel" but placed it on the highest towers, that the benighted scenes through which the Scientific Traveller has to pass, in his search for Knowledge may be illumenated, and he be cheered as his march is onward—

As we have before stated no particular Symptoms can be taken alone as they are frequently absent in many of the worst forms of this disease. Arnaud says there may be Acute Gastritis without pain or vomiting, just as there are cases of Pleurisy or Pneumonia without a stitch in the side— He mentions the case of a woman who had vomiting for Forty days, but complained of no pain in the abdomen— When examined after death there was found Ulceration of the Stomach— He also relates another in which the habitual faintfulness from time to time in the epigastric region, led him to the correct diagnosis

of this disease - and in this case there was no vomiting - Hiccup has been considered a symptom of much importance in this disease: as it leads us to form some rational conclusions in regard to the location of the inflamation present; and which is supposed to be situated about the cardiac orifice - This has been shown in three instances by Post Mortems made by Dr. Stokes. And he says, that, when Hiccup depends upon inflamation of the cardiac orifice, the patient will frequently complain of a pain in the lower part of the chest, along the course of the diaphram -
Dr. Watson says that hiccup does not always attend acute Gastritis, and that it sometimes occurs early in the disease, and frequently not until late.
The various conditions of the tongue have also called out some valuable, and interesting facts in connection with Gastro Intestinal disease - It is the opinion of Louis and Andral

and confirmed by other Pathologists, that there is no direct relation existing between the state of the tongue and the Stomach. That the tongue may have all the appearances indicative of Gastric disease, and the Stomach clear of disease. And that the Stomach has been found in the most diseased condition, and the tongue has assumed none of the characteristic marks. Louis in speaking of the conditions of the Tongue, has said, that like all other organs in febrile diseases, or during febrile or inflamatory action, in the constitution, it is liable to attacks of inflamation which gives to it, its various morbid appearances. Thus, if we weigh in our minds all the opinions of the wise and learned of our Science, as bearing upon this point, we find that they in the most look upon this little organ as a good, nay, I may say the best, or the surest index of disease. One that is somewhat instinctive in our natures

that seems to controul our opinions when called upon to witness the effects of disease as it is preying upon the constitution of our fellow creature - I have witnessed myself the practising Physician as he stood by the bedside of his patient and allmost the first question is "let me look at your tongue" On this subject I like the remarks of a late author, in the consideration of this point - Who says. "One condition of the tongue may be attended to, which is almost invariably an index ~~xxx xxxxxx~~ of Gastric irritation of an inflamatory kind - It is when this organ, not materially changed in other circumstances, presents at the point and edges a number of vividly red points - These resemble grains of vermilion scattered over the tongue - They appear to be the papilla enlarged, and supplied with an increased quantity of blood - When there is any coating upon the tongue, the brilliant papilla are seen uncovered by it - I believe this condition is seldom found unaccompanied by vascular irritation of the Stomach"

I conceive fever to be one of the most important Things connected with this subject, as the Violence and danger attending diseases of this Character frequently manifest themselves to us by this means - Authors are generally agreed upon the fact, that Acute Gastritis is one of those diseases that runs its course rapidly - Therefore may be implied the decision of our minds on a course of treatment which will most promptly subdue the disease as speedily as possibly - The fever at the commencement of Acute Gastritis is at that time of an inflamatory character - but we may soon detect a great tendancy to assume the Typhoid form — It is from knowledge, then we are to act in prescribing our remedies - Causd - As we have stated in the course of our remarks, Acute Gastritis is rarely met with as an Idiopathic affection; hence the most frequent causes of this disease are such as are found in the class of Constitutions, acting either directly, or indirectly

upon the stomach. Thus the poisonous effects of the different chemicals may be exerted when endermically used, or applied to a denuded surface, by means of the powers of absorption. In proof of which I have been satisfactorily convinced from a case I witnessed not many months ago - which was Acute Gastritis in a very violent and dangerous form, caused by the imprudence of a mother in applying a goodly portion of an ointment made of Acet. Cupri on the head of her little daughter for the cure of Tinea - And in curin the Tinea she came very near killing the child: - Then we are justified in saying that such agents will act by absorption almost as certainly - though not as speedily as if swallowed, and placed immediately in contact with the mucous membrane of the stomach - Large draughts of cold water, swallowed when the body is heated; excessive debauch, the immoderate use of distilled, or soar fermented liquors

Large quantities of food taken into the Stomach at one time, a imprudence in eating during convalescence after severe illness, all may produce acute inflamation of the Stomach. Many others might be mentioned were I disposed to enter into what I conceive to be useless detail. The morbid appearances of the Stomachs of those who die of acute Gastritis are found to be Redness, Softning, Ulceration with sloughing, and not unfrequently perforation of the villus membranes. Broussais in his Clinique Medicale has reported cases that were under his own care, in which all these Pathological conditions have existed. He gives the case of a female who had laboured under Phthisis but who eventually died of acute Gastritis. Upon examination, the perforation was found sufficiently large on the great Cul de Sac to readily admit the index finger to be passed. The rest of the Organ was much diseased and was from the effects of acute Inflamation, and not as some

have suppressed, though speculation. Spontaneous perforation —. Redness has caused more dispute - and elicited more argument among Pathological Inquirers that any other morbid appearance connect with the subject of Gastric disease. Thus more vascularity has been taken for actual disease, and it upon this point Broussais and his followers have split from the distinguished Pathologists who boldly assert their preference for a contra theory, based upon enlightened experience, and convinced by accute observation of numerous cases under their care —.

Treatment — As Acute Gastritis is one those diseases that runs its course very rapidly, little time is to be lost in the application of our remedial agents - If satisfied that it is, or has been produced by the action of poisons, and if called upon sufficiently soon, our first object should be to endeavour to throw it off of the Stomach by emetics that act promptly and efficently: also

such measures as are said to neutralise and thereby destroy the effect of certain poisons - It is only in such cases that we are justifiable in resorting to this class of medicines (Emetics) when we are satisfied there exists inflamation of the Stomach. The deleterious effects of Emetics in Gastritis are much the same as those of Purgatives in Enteritis If the Pathological conditions of the Stomach be considered as I have already pointed out, it is not a difficult matter to form in our mind the correct principals that should govern us in the course of treatment If the fever is still of an inflamatory character when the case comes under our notice, all our remedies must be premised by General Bleeding, and repeated only by the impression made upon the pulse, which must be taken for our guide - However, we must bear in mind, that the general weakness and frequency of the pulse, should not deter us from the use of this important remedy, as its action after a small quantity is suffered to run, becomes much increased - from which fact authors

advise us to keep one finger on the pulse during the flow of blood, and if the pulse rises we may feel perfectly safe in further abstraction. Although general bleeding is an important remedy in the treatment of acute Gastritis, we are not to expect the same happy results from it, as we do in inflamation of a Serous membrane; and we must look only upon it, as the great means by which the system is prepared for Local Bleeding, and other revulsive agents. The abstraction of blood by cups is of decided advantage, if the Tenderness over the Epigastric region does not forbid it. Leaches used from time may be resorted to, and some recommend the bites to be covered with a soft poultice. After inflamatory action is so far removed as not to require further loss of blood. Blisters may be used with advantage. notwithstanding all the prejudice of Broussais against their use, who condemned them as the "blight of Mal practice" Effervescing draughts have been recommended by some. and may

I think be used occasionally to quiet the great irritability, nausea, & vomiting so harassing to the patient. Frequently however, these will be as speedily effected as taken into the Stomach. Ice in Soda Stomach water, or lemonade, are probably the best means that we have to quiet the Stomach, as well as the marked effect it has in subduing the inflamation. Professor Chew recommends the juice of dandelion, and says this has been successful in his hands, when all other remedies failed in the relief of that constant disposition to vomit. Purgatives in this disease are perfectly inadmissable. If the bowels are confined Enemata should be used. Mild are the best, unless, we wish to overcome much costiveness when these of a more purgative nature are ~~to~~ to be depended on. Strict adherence to the horizontal position, and the most scrupulous attention must be enforced in regard to the taking of food into the Stomach. Indeed, through the entire course of this disease too much steps cannot

be placed upon this particular. As the slightest imprudence may produce an irretrievable injury. During convalescence warm clothing should be worn, and the general habit must be strictly abstemious.

If we meet with such cases in the treatment of Acute Gastritis that seems to baffle all our efforts, and when from an inflamatory state it passes to that of a Typhoid, our course of treatment should be changed to one of a more stimulating nature. Supporting by all means adapted to that effect the vital energies of the system; and not unfrequently our perseverance shall be rewarded by the final recovery from such a melancholy state, to one of health.

Thus, I conceive I have submitted all that is of much importance connected with the different relations of this truly dangerous, and important disease. Though its imperfections may stand out as Mountain rocks to the scrutinizing eye it only becomes me to say "would it were worthier"

An

Inaugural dissertation on

pneumo-thorax

Submitted to the Examination

Of the

Provost Regents and Faculty of physic

In the

University of Maryland

For the

Degree of Doctor of Medicine

By

Nathan C Nelson

of St. Mo.

Maryland.

February 1845.

To

The faculty of physic

in the University of M.D.

This imperfect treatise

Is humbly dedicated

As a tribute of profound respect & gratitude

for the benefits resulting from

the able and masterly manner

in which they discharged the duties

devolved upon them

who deserves more eulogy

than it becomes me to express

Nathan Nelson

As it is a duty incumbent upon every Student of Midicine, prior to his becoming an M.D. to prepare a dissertation, or in other words a thesis on disease, which is submitted to the consideration of the faculty. Therefore with due reverence I submit the following:

Pneumo-thorax.

There are scarcely any diseases which the human body is subjected to, that are calculated to excite greater interest in the minds of medical students, or inquirers, than inquiries into the nature, cause, and treatment of diseases within the thoracic cavity. Our curiosity on this subject is somewhat more awakened now, than the curiosity of the generation which preceded us. And every enterprising person with the expectation of succeeding in the practice of Physic, must, as a matter of course, become thoroughly acquainted with the use of the Stethoscope, &c

the sounds elicited from the chest 1st in a healthy condition & 2ndly in a morbid condition. Auscultation & percussion are sufficient in diagnosing the several diseases peculiar to that region of the body alone, without the aid of constitutional symptoms, which if we believe the old authors,), was the main reliances in the diagnosis of all the Pulmonic diseases, and a migty poor aid it was too.

The labours of a few indefatigable men have well nigh cleared away the ruins & rubbish of past systems. But the ample superstincture must yet be securely and splendidly raised by the medical architetes of coming ages.

"Now, the interior of the chest is the theatre of numerous & most important morbid changes, In that cavity are lodged two out of the three organs most essential to life, The heart, lungs & brain,

have been said, by a bold figure of Speech, to constitute the "tripod of life:" and the two former are planted in the Thorax. In the Same division of the body lie also the great blood vessels and many other parts of scarcely less importance. With respect to the heart, its alterniate Swinging movement Cannot long be Suspended, and the patient Continues to live: and three minutes' total interruption of the play of the lungs would in most Cases be irremediably fatal. And lesser impediments to the free working of either of these two vital organs are productive of great distress and lead often to Consecutive changes of a verry serious nature in Various other portions of the body. I Shall now endeavour to lay before you the mode in which this disease may arise Such as the Physical Signs, Prognosis, Treatment &c The discovery of this disease, or rather of the

effect of other pulmonary lesions, is of mo=
=dern date, Though it, for a long time, received
no distinctive name till the term pneumo-
-thorax was proposed by M. Itard, and subse=
=quently adopted by writers on pulmonary
diseases, This disease is no berry uncom=
=mon occurrence, and is always attended
with the most destressing effects on the
action of the lungs and heart.
Pneumothorax may be produced in three
different ways. 1st. It may be the consequence of
a partial pleurisy 2nd another kind of pneumo=
=thorax is that which may be called idiopathic,
and arises from an effusion or secretion of
air into the sac of the pleura without
perforation, ~~of the~~ This disease is a rare one.
It is said to occur sometimes towards
the termination of fatal diseases, in the
same manner as tympanites, occasionally
occupies the peritoneal sac under
similar circumstances; I have not

witnessed such a case as were the signs of pneumothorax were observed during life; but some of our pathologists state, that they have witnessed several times a little air in the pleural sac when it is open after death without any discoverable perforation of the pleura. It is possible that a little air may have been exhaled from the animal fluids after death, and then increased by exosmosis through the lungs; the facility with which gases pervade dead membranes countenances an such a notion. It is said that pneumothorax have occured in a few instances at the commencement of pneumonia, and soon disappear: but, as the chief sign in these cases was a remarkable resonance on percussion, I suspect these were examples of the production of tracheal or amphoric sound, from consolidation of the upper lobe of the lung & not

Cases of pneumothorax. 3rd This is by far the most common kind of pneumothorax And is caused by an unnatural Comm=
=unication between the pleural sac and the external air, and this may be by a perforation either of the external parietes or the pulmonary pleura. This is the usual cause of pneumo=
=thorax, and constitutes the great bulk of the examples that are met with. The perforation depends on the progress of the ulceration, generally of gangre=
=nous abscess through the pleura. In cases of ulceration reaching and perforating the pleura indicates a bad state of the restoring powers, and a want of form or shape in the products of infl=
=ammation; for under ordinary circu=
=mstances ulceration could not approach the pleura without causing it to inflame and throw out

-out coagulable lymph, which becoming
organized, forms either a protecting thick=
=ning of membrane or closed adhesion
to the costal pleura. We see this in most
cases of chronic phthisis, where the superior
lobes are generally adherent to the ribs.
Some of our pathologists state that they
have witnessed ulcerations to extend from
a tuberculous cavern across the two layers
of the pleura, thickened and adherent,
and completely through the walls
of the chest, so that when the patient
coughed, air bubbled out of two or three
fistulous openings in front of the chest,
but there was pneumothorax. On the
other hand, pathologists say they met
with more than one case in which
the adhesive process seemed quite
incapable of protracting the pleura,
which was consequently perforated
at several points, wherever in fact

the ulceration of the lungs reached it, and
air freely passed into the pleural sac by
all the holes, I believe from what the diffe-
-rent authors say, there is only one perforation,
and this is generally near the apex of the lung,
in connexion with some of the cavities which
first form there.
The perforation is completed in most instan-
-ces very suddenly — a part thinned by
ulceration, giving way during a fit of
Coughing, or some forcible act of respira-
-tion, Some of our pathologist state in particular
that they have seen this ~~respiration~~ rupture
produced by external violence, The perfo-
-ration is to admit air more or less rapidly
into the pleural sac, which by equalizing
the atmospheric pressure outside and
inside of the lung, permits it to assume a
state of collapse; Hence dispnœa, is more
severe in proportion to the extent to which
the air enters and the lung becomes collapsed.

I believe the access of air to a serious mem=
=brane which is unaccustomed to it, with the
discharge of matter from the ulcerous opening
will produce irritation and very likely
inflamation of the pleura. It is quite obvious
to persons that perforation of the pleura will
not fail to introduce air into its sac, the
amount and effect of this introduction of
air will vary Considerably according to the
size and other Considerations of the ulcerated
opening. If this opening be very small, or
if, as it not unfrequently happens, it
be so placed that the walls of the chest close
it in expiration, by which it is rendered
valvular, or if it be below the level of the
liquid, the air introduced by each insp=
=iration will not escape as freely in
expiration, and the results will be the
progressive accumulation of air in
the pleura, and Consequently increasing
Compression of the lung and dyspnœa;

And in this way perforation of the lung has in some cases caused suffocation within a few hours of its occurrence; When the perforture be of larger size, and no impediment occur to the passage of air through it, it will interfere with respiration only so far as it suffers air to pass outside of, instead of into the lung. When the air passes with facility or thus freely, the pleura is more irritated by it, and there is a more copious secretion of liquids, which is generally more or less purulent and often foetid. In either of these cases, after the ~~subdivision~~ subsidence of the dyspnoea, pain, and spasm, first caused by the entry of the atmospheric air, I believe from what some of our pathologists say, that there are no characteristic general symptoms which can serve to distinguish pneumothorax. The occurrence of perforation may sometimes be suspected from the sudden supervention

of acute pain of the side and oppression;
But such sudden attacks sometimes
take place from pleurisy without perforation,
Some of the pathologists state, that they have
repeatedly known perforation to happen
without being followed by any remarkable
increase of pain or distress.
The physical signs of pneumo-thorax are
generally very remarkable and distinctive.
Whenever there is air within the pleura it
will give to the walls of the chest a freedom
of libration, and therefore a degree of
resounding on percussion, even greater
than that which the air-filled structure
of the lungs confers upon them; so that
percussion will give more of the drum
like note or tone which is obtained by
striking on the region of the stomach or
Cecum. This is more marked in proportion
as the quantity of air is considerable.
And undoubtedly the same circumstance

will also impair or destroy the Sound of Respiration; for the air not only removes to a greater distance in the pulmonary Structure in which this Sound is produced, but also by its pressure diminishes that entrance of air into the Cells on which the Sounds depend;. And of Course there must be this remarkable Contrast of Signs to distinguish pneumothorax- there is a clear or hollow Sound on percussion, with little or no Sound of Vesicular Respiration, whilst the healthy Side gives a duller Sound on percussion, but a much more distinct Respiratory murmur- There is however produced in air-filled Cavities another class of Sounds, which often gives decisive Evidence of their Existence. The Character and Cause of these Sounds may be shown by a simple experiment. If the mouth of a caoutchouc bottle be held to the ear, and its outside Struck,

each Stroke causes a short tinkling note, like the clink of a piece of metal or glass. This note is a kind of echo, produced by the reverberation or repeated reflections of the impulse from the walls of the Cavity, and it is Shrill and acute because the reflections are Short and quick in so Small a Space. This Same kind of Sound may be heard in other hollow bodies, such as as an empty Cask; but it is there less Shrill, because the Space is larger. When any Sound proceeding from or Communicated to, the interior of the Cask, the Caoutchouc bottle, or any Cavity in the body with reflective walls, will be accompained or followed by this Sort of tinkling or ringing echo, which will be more prolonged and distinct in proportion as the walls are perfectly and uniformly reflecting. This kind of Sounds may often be heard on using the Methoscope to the Stomach

and large intestines, as their contents move and cause a sound within them, so we perceive, this tinkling echo may accompany the sounds proceeding from the air-filled cavity in the chest, and it becomes a dest=-inctive sign of the existence of such a cavity. It appears in idiopathic pneumo-thorax, and in that partial kind resulting from the absorption of a pleuritic effusion confined by adhesions, although the cavity be present, there may be no sound produced in it, or transmitted to it, so as to cause the tinkling echo, I think percussion on the external walls will do this, and some of our patholo=-gists state that they have heard the metallic-tinkling, accompany both the voice and the Cough, in a case of partial pneumothorax, without liquid effusion or perforation of the pleura, the sound being transmitted to the cavity through the condensed tissue of the lung. The metallic tinkling sound

is commonly heard, where the pleura is perforated and where liquid is present, not, as one of the pathologists supposed, because these conditions are esential to its production, but because the motions of the liquid or of the air through, make sounds within the cavity which serve to show its echowing properties, so metalling tinkling has often been heard after the operations for empy=ema, manifesting the presence of air in the pleura. It is stated by some of the authors that perforation of the pleura, with its consequence produce pneumothorax and liquid effusion, is not a verry unco=mmon accident in the course of phthisis; and its signs are so remarkable, that they can scarcely fail to be recognised ~~by~~ even by those who are but moderately versed in auscultation, I believe from what little knowledge I have derived from the different sounds, that

the tinkling echo may present several modifications, which it is useful to notice, as they serve to give a more accurate knowledge of the Condition of the parts and ~~other~~ their tendencies. It appears to me that when the perforation is small, or obstructed by its position against the walls of the chest or below the level of the liquid, the tinkling is seldom heard except on coughing or taking a full breath, which reaches the cavity and may throw the liquid into bubbles. It is sometimes said that the voice may reach the cavity through a Consolidated portion of the lung, and then it will be accompained by tinkling. When the orifice is large and free, the air will pass in and out in ordinary breathing, and will produce in its ~~Cavity~~ vicinity a sound like that of blowing into the mouth of a glass bottle:

this kind of respiration is therefore called Amphoric. In such cases there is seldom so much oppression of the breathing as in those where the air passes less freely and accumulates in the cavity. When listening for the tinkling phenomena, it must be held in mind that they may be audible only in certain parts of the chest where the lung is not adherent, and where the liquid effusion does not reach. They are heard in the sitting posture, Generally about the mammæ and the lower part of the Scapula and Axilla; but some of the pathologists state they have heard them in some cases in every part of the affected side, and in others only in one spot. "There certainly must be a degree of tension in the walls of the cavity to make them good reflecting surfaces, and if this be deficient at the spot of the cavity opposite that on which the Stethoscope

is applied, the Sound may be observed, and not reflected. I believe that the addition of liquid to the air in the chest makes the diagnosis still more easy. I am not verry well versed in percussion, but some of our pathologists say by percussion we can find the exact level to which the liquid rises, and that this level moves with change of posture; this is much more distinctly perceptible than with simple liquid effusion. And I think the motions of the liquid may farther give verry decisive evidence of its presence with air in the Cavity, on change of posture and on Coughing, the liquid will sometimes drop from the parts which have just been immersed; and the Sound of this will exhibit the metallic ringing in so distinct a manner, that it resembles the note which a glass or porcelain vessel yields when

struck. If the liquid be agitated more forcibly, as by the patient giving his trunk an abrupt jerking turn, or being violently shaken, it may be heard to splash most distinctly against the walls of the chest; this is the signe of succussion described by Hippocrates. I think it may be heard more distinct by applying the ear to the chest at the time of the movement, and then the tinkling is heard to accompany it, and sometimes to followd it as the liquid drops from the sides, or the bubbles break on its surface. The splashing is not easily produced, unless there be a good deal of air in the pleural cavity with a moderate quantity of liquid. The proportion of these are however better ascertained by percussion.

The prognosis of pneumo-thorax from perforation must be generally unfavourable, because, besides its own formidable

character, in the last majority of Cases it arises from tuberculous diseases of the lungs. Provided however the tuberculous disease be very limited, it does not seem unreasonable to think with one of our pathologists that the Cases may not be entirely hopeless. One of the pathologists, I mentions ~~[illegible]~~ instances in which pneumothorax lasted for six years. Another describes a Case in which the individual survived the perforation eighteen months, and probably would have lived longer if he had not imprudently exposed himself in his work as a bricklayer; for the signs of the Cavity had disappeared, the Side had Contracted, and the general health had been much improved. A case related by Dr Stokes, the patient lived for many months, during which he rode much on horse-back, and Could hear a splashing in his Chest when he trotted or cantered. Another

pathologist states having known two patients with pneumothorax, leave the hospital with the impression that they were nearly well, having gained flesh, and lost the worst physical symptoms, after the first severe consequences of the perforation had subsided. In such Cases which are to be considered exceptions to the general rule of the production, of the local diseases in the pleura, seems to act favourably in retarding the tuberculous affection of the lung; and if this be of limited extent, it is possible that it may be removed, the wound on the lung Cicatrised, and the Cavity of the pleura obliterated by Contraction and adhesion.

Treatment. The treatment varies Considerably according to the period of the lesions, and the Condition of the system. So that measures Calculated to relieve the symptoms of pneumothorax with

perforations of different kinds. In the first place the perforation and access of air and matter to the pleural sac is often attended by considerable prostration of the system, with rapid pulse and faintness, together with the pain and Cough, which are then the result of irritation rather than inflammation. Large doses of opium and morphia are necessary to allay this irritation; they may be advantage=ously combined with Calomel and Antimonials; and Sinapisms or warm fomentations may be applied to the affected side. Antiphlogistic or at least more active ones cannot be used * until the Reaction takes place, which generally begins in a few hours, bringing with it heat of the skin, strength and hardness of the pulse, and great soreness as well as pain of the whole affected side; then bloodletting, chiefly local, must

be used, with aperients, and Salines, accor-
-ding to the Strength of the patient, and
degree of fever present. This treatment may
be followed by blistering or tartar emetic,
Counter-irritations in proportion to the
Continuance of the inflamatory Symptoms.
We Must not forget that perforation of the
pleura and its Consequences are almost
always added to a previously exciting
disease, tuberculous phthisis and the degree
of advancement, that this may have
reached the propriety, and efficacy of
the measures for this accidental inflam=
= mation that has been excited. It Must
be kept in consideration, that when,
in Consequence of the Smallness of the
perforation, or its valvular Condition,
Air accumulates in the Chest, and
becomes the Cause of oppressive dyspnœa.
It is stated by one of our authors that
the immediate indications in this Case

is doubtless, to give exit to the air by punc=
=turing the chest; and also states that
this has been done in several instances
with great temporary relief. But I
should think before this operation is
prescribed, it should be considered
whether, as the relief from it will be
but temporary, the condition of the
patient be such as to make this likely
to outweigh the pain and risk of
this operation. But when added to the
different views in which the friends
of the patient may regard an operation
which proves but imperfectly successful,
they are sufficient to prevent us in
many cases from recommending it,
when the case occurs before the consu=
=mptive disease has advanced far,
it is of a different charater, and
when there is much flesh an strength
and when the physical signs have

shown that there is a large proportion of
Sound lung. If the air accumulates again
this opperation may be repeated. As it
is impossible to avoid the Continued
introduction of air into the chest, the
mode of performing the operation is a
matter of much consequence, then in
Emphysema. And in conclusion, I shall
say ~~Say~~ It is more desirable to puncture
below the level of the liquid, to allow it
as well as the air to escape.
Now Gentlemen, I do not deem it necessary
to say any farther upon this Subject. The
disease or lesion upon which I have
written is one of rare occurrence. Compar-
-atively speaking; So rare is it indeed
that I never expect to meet with a
Case of it; this however does not lessen
its importance, nor go to prove that
we should not train ourselves thoroughly
acquainted with it. I have ~~[illegible]~~

Studied it closely and have endavoured
to acquaint myself with it. I have writ=
=ten upon it, and done so as correctly
as my limited education would inable
me; I am well aware that you will find
many imperfections in looking over it,
but I must ask you to overlook my
errors, and correct me in my erroneous
opinions if you discover any;

That the blessings of an overruling Providence
may attend you in all your undertakings is
the prayer of your Friend — Nathan Nilson

An

Inaugural Dissertation,

On,

Phthisis Pulmonalis

Subjected to the Examination,

Of the

Provost, Regents,

And

Faculty of Physic,

Of the

University of Maryland,

For the

Degree of Doctor of Medicine

By

William H. Dallam

of

Maryland.

Baltimore March 1st

1845.

To Doctor Ashton Alexander

of Baltimore

Dear Sir

Permit me in this manner to offer you my sincere acknowledgments for the many favours and great kindness which I have received from you while having the honour of prosecuting my medical studies in your office: and allow me to assure you that time can never obliterate the remembrance from my mind of your politeness and attention.

As a testimony of my respect, and a slender tribute of gratitude, I beg leave to dedicate to you my first Medical Essay.

With esteem and respect

I remain your grateful Friend & former Pupil.

William H. Dallam

To

Elisha M. Bartlett M. D.

Professor of the

Practice of Medicine in the

University of Maryland.

This essay is respectfully inscribed as a mark of the respect and esteem in which he is held by the

Author

Introduction

Disease under its various forms has been the fertile source of pain and suffering to Mankind in general from the earliest period of their existence up to the present time.

From the very moment that we enter upon life's pilgrimage through out its entire Course we are constantly and perpetually liable to its assaults.

The very elements that constitute our existence are continually undergoing changes, which may afford the Materials for the construction of that condition of the System, whose tendency is our dissolution.

How often does the atmosphere become impregnated with Malaria the inhalation or absorption of which produces so much acute suffering to us all.

The food which we take for our subsistence

has, also, often proved the exciting cause of some painful Malady. In fact we are always surrounded by innumerable circumstances, which may at any moment deprive us of life. In the contemplation of such facts as these, we are induced to exclaim in the sad and melancholy but beautiful language of an inspired Writer of old, "Man that is born of a woman is of few days and full of trouble; He cometh forth like a flower and is cut down: He fleeth also as a shadow and continueth not;—

But of all the different forms which disease assumes, there is none more interesting in its character, or more fatal in its termination than Consumption. It may well be styled the 'fell destroyer' of the human race, for its fatal and irresistible grasp has hurried thousands to the tomb. Selecting for its Victims the brightest and

most beautiful of earths choicest creatures, it seems to whet as it were its insatiable appetite upon the deliciousness of the delicate morsels, which the wide-spread population of the universe so abundantly affords. Stealing along with slow but certain steps, it enters the bosom of its unconscious and unsuspecting victim, and there plants the baneful poison to work in secret "like the worm in the bud feeding on her damask cheek."

Referring too that period of life, when life itself seems dearest, for its attack, it throws a blight over the fairest prospects, and mars every vision of worldly happiness. It is this fact which attaches so much of interest to consumption. It is indeed true that man at every age clings most tenaciously to existence, and relinquishes not his hold without many a fearful struggle for

Supremacy. Yet it cannot be denied that the vicissitudes and experience of successive years have a tendency to weaken his attachment to earth, and in a measure prepare him for the necessity of dying—

But in the Springtime of being, when the feelings are fresh and vigorous, and the ardent imagination throws its brilliant colouring over every scene, robing it in enchantment, until life itself seems one long bright dream of poetry, it is then indeed most hard to die!— And this is the season when consumption almost invariably commences its ravages, as if even in its direful and devouring malice it challenged sympathy and interest for its victims.—

How often do we see the young man just launching forth upon the wide sea of life, his heart buoyant with blissful hopes and glorious aspirations antic-

-ipating a long and happy voyage, borne down suddenly by this fatal malady.- and if its approach be more slow and gradu-al it is not less affecting.-

Who has not watched the form just ripened into manhood wasting day by day into skeleton proportions, at its touch, and the fair and rounded cheek of the beauteous Maiden shrivelling and hollowing beneath the treacherous bloom that yet lends to its decay some vestige of love-liness.—

I have selected this disease as a subject for a thesis, not because I feel com-petent to throw any great light upon its treatment, but simply, because I have already become somewhat familiar with its appearance, having had the painful opportunity of witnessing its sorrowful effects upon several individuals with whom I was intimately acquainted.—

Phthisis Pulmonalis.

Phthisis is a disease arising from a tuberculous deposition in the Lungs. It is one of the most prevalent and fatal of all diseases, according to the general statistics the mortality from this affection in the temperate climates amounts to about from one fourth to one fifth of all the deaths that occur.

And indeed there is no land or clime on the wide surface of our Globe entirely free from its ravages, at least so far as we are informed. There are, however some Countries whose Climate and general condition are less favourable to the production of this disorder than others; and again there are certain others whose atmospherical changes are particularly adapted to its promulgation.

Phthisis derives its name from a Greek word, signifying a wasting away or

consuming, and thus expressing pretty plainly the general effect of the disease. This however, is not a peculiar characteristic of Phthisis, for there may be, and is, a wasting away, in very many other diseases, of the whole System, nevertheless, emaciation is very great in most cases of Phthisis, and is always present to a considerable degree in all cases of long standing, in the latter stages,-

Phthisis or consumption, as it is generally called, originates, as I before said, from a peculiar diathesis favourable to the deposition of tuberculous matter in the lungs,- what the exact nature of this diathesis is, has been a question of considerable interest to Medical Men, for a long time; and although various opinions have arisen, and great attention has been bestowed upon the subject, there is much to learn still, both in relation to its nature and

its removal or prevention.—

Tubercles may either be hereditary in their origin, that is they may exist in the lungs of the Foetus, or they may be formed after birth, because of a disposition transmitted from the parent to the child; and this is by far the most common mode of their appearance.— Or they may be formed accidentally, as it were, by a combination of certain circumstances, whose general tendency is the production of that condition so conducive to their generation.—

These circumstances are such as occur from other affections,— Catarrhal diseases or Organic disorders, with low stages of fever, which so debilitate the system as to render it susceptible to the slightest impressions of cold &c.—

Seat of tubercles.— They generally commence first, at the apex of the Lung and

then gradually spread over the upper lobes, and thus continue on, until the entire lungs are completely covered.—

Why they should manifest this seeming preference for the upper Lobes, on their first appearance, is rather difficult to account for satisfactorily, unless it be, as some Writers have thought proper to assert, because the upper part of the chest is more exposed to the impressions of the cold, and this acting as an exciting cause, developes the tubercles first in that part with which it comes in immediate contact; and they further state as an instance to prove the truth of their assertion, that they appear most frequently in the female Sex, whose chest and neck are more particularly exposed to the action of the cold. This may be true in some cases, but how would they account for the preference which they seem also to have for the upper part of the Left lung

which is equally exposed with the right, — for according to the testimony of several distinguished Authors, the left lung is more frequently attacked by tubercles than the right.

These facts are, as I before stated, very difficult to be accounted for, and they are of very little importance, I imagine, so far as the cure of Phthisis is concerned; Still in their connection with the history and character of the disease, they become invested with a degree of interest and importance, more especially as they are known to be some of the peculiarities of so fatal and common a Malady as Consumption.

Phthisis is at first slow and insidious in its progress. Tubercles may exist for a long time in the lungs without giving any evidence of their presence, until, at length, some exciting cause hastens their development. One of the first Symptoms that generally leads to their detection is hemorrhage, though this is

not invariably the case; but whenever hemorrhage does take place without any manifest cause, such for instance as violent exertion or acute inflammation of some organ or some other circumstance of a similar character, we may always suspect the existence of tubercles, more especially if it be preceded by cough and pain in the breast or side, which though it be not severe at first will most likely increase as the disease progresses.—

Phthisis may be divided into three stages, with reference to its symptoms and the anatomical changes which take place, but before speaking of the different stages, It may be necessary to say something of the character and appearance of tubercles.—

M. Laennec, who appears to have examined into, and understood well the changes which tubercles undergo from the first period of their formation throughout their entire progress of development, says, there are three

kinds or species of tubercles, and he enters into a very minute description of these varieties, designating each Species by a different name, and dwelling with a good deal of minuteness and precision on the peculiarities of each genus or kind. He considers them as possessing different degrees of power or influence, as regards their baneful effects upon the Lungs.—

He describes one kind, as being insulated bodies, scattered over the lung but having no communication with each other, when they first appear; these are the Miliary tubercles and are the most common. they are grey, semitransparent, and sometimes transparent, of various sizes, sometimes no larger than a millet seed, and then again as large as a nut, either perfectly round or of an ovoid shape or form,—

Whatever be the form the tubercles presents

it has at first the appearance of a grey semitransparent substance, which gradually becomes yellow, opaque, and very dense; afterwards it softens and becomes fluid like pus and is then expelled through the Bronchia, and cavities are thus formed, which are sometimes designated ulcers of the Lungs or more properly, Tuberculous Excavations -

The different changes which the tubercles undergo constitute the several Stages of Phthisis, and these, as I said above, are called first, second and third, being each distinguished by different degrees of severity, and these I will now endeavour to point out in their common mode of approach and according to their several Symptoms, -

Symptoms and Progress. The Symptoms during the first Stage are not always well marked, and can only be made out by the general condition

and appearance of the patient. The first intelligible sign, as I said before, is haemorrhage. This is not always present, but in the majority of cases it does occur. It may take place several months previous to the occurrence of any other symptom. The quantity of blood expelled differs in different cases it may be small or it may be pretty considerable, and it will occur perhaps two or three times at long intervals before any other circumstance intervenes to arouse the suspicion of the cause,-

The patient experiences a slight pain and sense of stricture across the chest, followed by a cough which at first is so slight as scarcely to be observed by the patient himself.- The Sputa if any, are small in quantity and mixed with streaks of blood, or having a frothy appearance and semitransparent.-

The respiration is hurried on making any exertion, such for instance as is requisite in

ascending stairs, or an exercise of any kind.
The circulation is accelerated especially after eating or towards evening. a slight chill-iness is felt in the afternoon, followed by an increase in the temperature of the Body.
There is also a preternatural redness observed on the cheek. and the palms of the hands and soles of the feet. and this is the commencement of what is commonly called hectic fever.

Emaciation also occurs, and the patient begins to observe he is losing flesh, as he terms it. All these symptoms may remit for a while, as warm weather approaches but will soon occur again with increased strength and violence.

The tubercles, which have all this time been gradually increasing and spread-ing over the lungs, will begin to soften and matter will be secreted which acting as a foreign substance causes irritation and in-

inflammation, and gradually works its way to the Bronchial tubes and is thus expectorated. Cavities are formed by its expulsion, and this Constitutes the Second Stage -

In the Second Stage, the febrile excitement is much greater; the pulse is much more rapid and quick; the respiration is difficult, and the flush on the cheek is constantly present in one spot about the centre, and of a deeper scarlet circumscribed colour, while the rest of the face is preternaturely pale and haggard. Night sweats come on, and create considerable annoyance to the Patient.

The emaciation becomes so great, and the loss of flesh is so extensive, as often to cause the rings on the fingers to fall off which fit tightly before.

The cough is now constant and the sputa are increased in quantity and changed in appearance, being

thrown out or expectorated in masses, presenting a yellowish or pinkish hue, streaked with blood, and containing more or less pus which is so thick and tenacious as to render it difficult to remove it from the vessel in which it is expectorated. The expectoration is always increased in the morning, having accumulated during sleep, and is expelled with difficulty.

The pain is considerably aggravated by the effort of coughing, and in fact every symptom having been increased during the progress of the softening process, has at last arrived at its acme, and now as the third stage approaches, they seem to decline in a great many cases and leave the appearance of a calm, which too plainly indicates the speedy termination of life.

Diarrhea will come on about the commencement of the third stage or rather near the close of the second. It may occur

however several times during the earlier course or stage of the disease, and will yield very readily to proper treatment: but when it comes on, in the latter part of the second, or first part of the third stage, it invariably reduces the patient to a perfect skeleton, and finally terminates life by actual exhaustion and prostration of all the vital powers.

The digestion is generally carried on without any manifest alteration during the whole course of the disease, and the appetite is often not at all impaired, and indeed is sometimes rather increased than otherwise.

The mind too retains its usual strength even to the very last hour almost of existence, though of course there are exceptions to this general rule. The patient will continue to look forward to the hope of recovery even after all the symptoms indicate beyond a doubt the certainty of death; and this is so frequent

an occurrence as to be almost a characteristic of Phthisis.—

There are a few other symptoms of which I ought perhaps to say something, though they are not of any very great importance, and first the appearance of the tongue.— This is not always of a uniform colour: it will often present a red appearance about the tip and edges, while the middle is covered with white frothy mucous: and again it may be very little altered from its natural appearance.—

The hands will be thin and slender, the skin white and wrinkled, and showing the veins plainly: the fingers long, with bluish colour about the nails, which are often inclined to curve and grow crooked. This is more striking in consumption than any other affection. The hair becomes soft and easily combed out. All these slight cir-

circumstances when taken separately, seem of very little importance, but when observed conjointly, may assist very much towards a true and perfect diagnosis.

We come now to consider the physical Signs of Phthisis, which are generally thought to be the most certain and characteristic of all the symptoms indicative of Phthisis.

Physical Signs. These are such as are discoverable by Auscultation and Percussion. In the first stage or incipient form of consumption, the Signs on percussion are not very appreciable, but as the tubercles increase in number and size, they compress the lung, and thus prevent, in some measure, the access of air through the air-passages, and thereby interrupt free and full respiration. When these tubercles have grown to a tolerable size we will have dullness on percussion, and the respiratory Murmur is manifestly

interrupted: and as soon the softening process is set up and pus begins to be formed, the dullness is still more increased, and the respiratory murmur is entirely extinguished and the cavernous respiration is established, proving beyond a doubt the existence of cavities in the lung—

And now also pectoriloquism is present, caused by these tubercelous excavations, and the metallic tinkling and various other sounds more easily understood when heard than they possibly could be from a description,—as the third stage of Phthisis comes on, all these signs are nearly lost, and those alone remain which indicate the presence of large cavities—

The mucous rattle is perceptible during the softening process, under various modifications, but when the matter has been expectorated it is then that pectoriloquism is perceived—

Prognosis. The prognosis in Phthisis is always unfavourable, yet there are certain circumstances the existence of which may somewhat modify its gravity.-

These are first, if the patient is young and naturally of a strong and healthy constitution, there being no hereditary predisposition. We may then entertain some hope of a favourable termination of the affection, more especially if the patient belong to the Male Sex and is not addicted to any bad habit, and the disease is in the incipient stage.-

But on the other hand, if there is a predisposition arising from an hereditary cause and we have every Symptom present indicating the certain existence of tubercles in the Lungs, we can scarcely anticipate other than the death of the Patient, and that in a very short time, if we have reason to believe the softening process has already

commenced. Still, every means should be employed that can possibly exert any influence towards the arrest or alleviation of the sufferings of the Patient.

Diagnosis

The diagnosis of consumption is comparatively easy, when we take into consideration the important and convenient Methods which have now become known to all, as efficient assistants in its discovery. I allude to Auscultation and percussion.

If the disease has been progressing for a considerable length of time in a slow and gradual manner, before we have had an opportunity of seeing it, there can be very little difficulty in making out a proper diagnosis if the condition of the is closely examined into and unfortunately this is too often the case. for very few individuals will applay

to the Doctor for advice until they find there is no other alternative: and this disease is generally so deceptive in its approach, that it will have advanced very far in its course before the patient is aware, himself, of its presence.

The only certain way of detecting any disease is by inspecting carefully every symptom that exists, and inquiring minutely into the causes that first lead to these symtoms or effects: and after having done this, there can be generally very little difficulty in the diagnosis.

The affections, with which, Phthisis would most likely be confounded, if mistaken at all, would be Chronic Bronchitis or Pneumonia, But although the Symptoms of the latter are somewhat analagous to those of Phthisis yet still I think the difference is sufficient

-cultly great to indicate a proper and perfect diagnosis; and even if consumption were taken for Pneumonia at first the inefficiency of the treatment would soon discover the mistake.

I shall conclude the subject of the diagnosis by merely saying that if the whole history together with the habits of the Patient is closely and attentively inquired into with his present condition also, there would be evidence enough by which to detect the nature of the disease.

Causes of Phthisis

The cause of this, in the first place, undoubtedly, is a hereditary predisposition. What the exact nature of this disposition is cannot well be understood; we know from experience and observation that certain individuals inherit from their ancestors a condition

of the system, or a peculiar constitution, particularly favourable to the formation of Tubercles in the Lungs. yet there must have been a first cause to produce this effect. and that undoubtedly was owing to the combination of various circumstances of a different character, but all having the same general tendency.

And again, we know that Persons inheriting this constitution are often characterized by some peculiarities of their general appearance which enables us to distinguish them from others: thus, for example, we see that persons, who, possess a delicate soft skin and large prominent blue eyes with light hair and a lively temperament, are most frequently the subjects of this affection: and there is also another class of individuals whose appearance differs in many respects

from the first, but whose similarity to each other is perfectly evident, that is often attacked by Phthisis—

In the second place consumption may be caused by other affections, even where no hereditary disposition already existed. Inflammations of the different organs of the body accompanied by long continued fever are very frequently followed by Phthisis, especially inflammation of the respiratory apparatus in general.

Also two stages of fever, leave the system so reduced and broken down as to be exceedingly susceptible to cold. Phthisis is one of the most frequent consequences of Typhoid Fever, according to Dr Bartlett, to whose lectures I am particularly indebted for a considerable portion of my knowledge of this affection.—

Every thing having a tendency to weaken

and debilitate the general tone of the system may act as the exciting cause of Phthisis, where the disposition already exists to it. Sudden atmospherical changes from cold to warm temperature, by relaxing the system, make it susceptible to the slightest impressions, and thus catarrhal affections are brought on which may result in consumption.

So also, long confinement in a close damp atmosphere, not sufficiently well ventilated, will contribute to the same effect - and again, all the depressing passions of the mind, and deep study, combining as it does with the foregoing circumstances very frequently, may lead to the same result -

Excesses in dissipation of any kind will have the same baneful influence in developing the disposition to this fatal malady: and in fact, as I said above, every thing that tends to change the

healthy tone of the system or to debilitate the general constitution may hasten the exhibition of tubercles in the lungs -

Treatment of Phthisis.

The treatment of Phthisis will be different according to the circumstances which attend upon the case; and indeed there is very little that can be done, except as a palliative in any case of long standing, and that has already made considerable advancement towards the second stage. Experience has too well attested the entire and utter failure of any plan of treatment that can be adopted for the removal or cure of the disease when once it is fully established in the System: and though there are many assertions to the contrary. I don't for a moment hesitate to say that I cannot and will not believe there has been one single case of confirmed and well au-

theuticated consumption, which has been cured after the second stage has been fully established in the system, and there is a hereditary disposition existing to the disease.

All that can be done in expectation of a cure must be accomplished in the incipient form before the tubercles are fully developed; but it too frequently happens that either through ignorance or negligence upon the part of the patient himself, or his friends, the disease has become far advanced in its progress before any means are employed to arrest it; and this perhaps is one of the chief reasons why ~~the disease~~ it has so often proved incurable.

If those individuals who are suspected of having a predisposition to Phthisis either from hereditary or other causes, were to adopt a proper mode of living and refrain from all habits that are known

to have a tendency, by their injurious effects to undermine and weaken the constitution, there can be no doubt, they would often escape the disease altogether — They ought in the first place, if it is possible to do so, to select some mild and salubrious climate in a tropical Country for their place of residence, and engage in such occupations as require active exercise without being laborious, in the open air. —

There are many however whose business and circumstances are such as to preclude them from the advantage of this mode of proceeding, and the only alternative for them is to adopt a manner of living which will best suit their condition, taking every precaution to prevent and guard against all existing causes that might lead to disease —

After the Affection has once established itself in the system, the ordinary means must be employed for arresting its progress and

the remedies which have been found, by experience and long continued observation, to be most efficient for this purpose are those which are now commonly known and used by every Practitioner, not perhaps with the hope of curing the disease ultimately and effectually, but they may at least prolong life for many years.—

Blood letting, both general and local, is one of the most efficient means made use of in the early period of the disease; and this must be carried into effect as often as the Symptoms seem to indicate its expediency, but there can be no positive rule laid down as to the quantity of blood to be extracted, as different cases will require more or less according to circumstances. Local Bleeding by leeches and cups is often of considerable benefit.

Also Blisters and counter-irritants are sometimes usefully employed. Issues and setons are occasionally beneficial but should

never be used where they can well be avoided. especially if the patient be of a sensitive, spare or irritable habit as they may only serve as a source of irritation and excitement that will be very unpleasant to the sufferer—

Emetics next to Bloodletting are the most beneficial remedies that can be administered, given in small and repeated doses so as to keep up nausea they tend in this manner to excite and stimulate the secretory Vessels to a greater activity in their several functions—

The Bowels must be kept regularly and moderately open by the occasional administration of a purgative combined with Opiates. Though the latter must be cautiously given and not repeated except when its use is absolutely indicated—

When the cough is troublesome Irritable remedies must be given to lessen it

possible its severity and if haemoptysis is present - Tartar Emetic in combination with Nitre and Ipecacuanha must be resorted to and followed by Saline Aperients.

Ice and Iced water will also sometimes prove serviceable, together with mild astringents such as Sulphuric acid, to arrest the haemorrhage -

All the Symptoms must be treated according as they severally indicate - Sweating and excessive perspiration may often be alleviated by Sponging the whole surface of the Body with Sponges dipped in a Mixture of Vinegar and Water and afterwards rubbing it dry with warm flannels -

Tonics will often prove of great benefit particularly the preparations of Iron and Sulphuric acid -

There are many other remedies that may

be employed in some stage of this affection some of very great benefit and others again whose efficiency is very doubtful. and some indeed whose qualities and properties were at one time esteemed certain specifics in Phthisis but longer experience has proved them mere palliatives at best, if not altogether useless—

I have now given only a general outline of the history and treatment of Phthisis. There are some things left unsaid that might have been said, but I deemed them unimportant, inasmuch as they could not appear new, for this subject has been written upon so often, that every thing is known concerning its history, and time alone can tell whether the cure of this disease will ever be certainly accomplished—

And in concluding allow me Gentlemen Professors of the Faculty, in the University of Maryland, to each individually and collectively, to return my most fervent thanks for the valuable information I have received from your interesting and

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By
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of
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1845

Introduction

A prominent obstacle to the progress of Medical Science has ever been the too prevalent custom, among her votaries, of giving names to phenomena which they themselves do not fully understand. This is, of course, to a certain extent unavoidable. Remarkable circumstances are observed, described, classified, and cannot, in the nature of things, pass unnamed. The difficulty of obtaining an accurate nomenclature results from the imperfection which must necessarily attend all early observations in any branch of science; for a strictly exact system of names depending upon a perfect appreciation of all the characteristic qualities of the entities which receive those names, as it necessarily does, cannot by any possibility be fixed upon until all those distinguishing qualities are fully & entirely comprehended. This, of course, is impossible when we consider the meagreness and imperfection of the means of investigation during the infancy of discovery. Who knows what might have been the result had Diophantus, and Pythagoras and Archimedes been acquainted

with the simple Hindoo notation by decimation, now familiar to every lazy schoolboy? And where would Medicine now have been, had Hippocrates used Ehrenberg's microscopes or Liebig's crucibles and test-glasses?

Another and perhaps still more efficient obstacle is the absolute incapacity of the greatest minds to perceive at once all the minutiae of their own discoveries. Like Columbus, they boldly venture across the mysterious deep, as yet unfurrowed by a keel, show where the unknown continent is, and leave for other inferior minds the task of scanning its features, measuring its extent, and showing to admiring ages the grandeur of the New World that has been found for Science.

From this imperfection of nomenclature results necessarily a confusion in the application of terms, different individuals using the same word to express very different states of the system. All this could be avoided if, in Medicine as in Mathematics, every writer would distinctly express his understanding of every ambiguous term he uses, or studiously refrain

from using such terms at all, if, as is too frequently the case, he merely throws them up as a screen behind which he may the more effectually conceal his own immeasurable ignorance.

Few words are better calculated to call forth the complaints that have just been uttered than the simple syllables Congestion. Different authors interpret it differently, and some no more allude to it than if there were no such a thing as congestion in Pathology. Yet with all this, it is one of the most important elements of disease, scarcely, if at all, inferior to the much studied Inflammation itself. Entertaining exalted views of the value of a more accurate knowledge of this pathological condition, the author of this Thesis at least will derive some benefit from devoting the time demanded of him by the old custom of Medical Institutions to an investigation of the subject of

Congestion

And first what is Congestion? The Dictionnaire des Sciences Medicales allows itself no small latitude in answering this question. According to that authority, it denotes not only the superabundance of blood, but also the collection of serum and pus in any part of the human body. Dropsies and ~~cold~~ abscesses would then be included under this exceedingly vague appellation. Andral, and with him many others, limit its interpretation to the presence of an undue excess of blood without extravasation, and divide it into three varieties, Active, Passive and Mechanical. The use of this term is still more restricted by Dr. Williams, who, in his Principles of Medicine, defines it to be "Local Hyperæmia with motion diminished," to contra-distinguish it from Determination which he explains as "Local Hyperæmia with motion increased." Billing allows no difference between Congestion and Determination, both of which he believes to be referible to one and the same cause, a deficiency of nervous energy in the coats of the capillaries. But, when we take blushing, the example cited by the latter author, and com-

pare it with some other "local hyperaemias," hypostatic congestion for example, we cannot fail to perceive the difference. If then there does exist, in point of fact, a difference in the character, symptoms, causes and terminations of different "local hyperaemias," it is both proper and desirable that distinct words should be used to express these distinct states of the system.

When we consider the anatomical characteristics of the circulation in any portion of the human machine, we observe two sorts of vessels filled with two sorts of blood. The capillaries are not alluded to here, because they have never been proved to be different in ultimate structure from the two great varieties of blood-vessels just alluded to. - Hence, every rule of sound logic would teach us to consider these minute vessels as merely miniature arteries and veins, regulated, so far as circulation is concerned, by the same general laws. It is now evident that "local hyperaemia" has only two species, arterial and venous. The former must be produced by increased action on the side of the heart, while the latter, when primitive, can only depend on diminished action on the same side. It is this variety of hyper-

emia, seated in the veins and caused by some obstruction to venous circulation, to which I propose to limit the application of the term, Congestion.

Symptoms. Suppose a ligature thrown around the finger;— the part becomes discolored, at first presenting a muddy blush, but afterwards assuming a darker and more livid hue. At the same time occurs an alteration in the sensation of the part. At first, there is a feeling of increased heat, which is presently succeeded by numbness, tension, and a vague sensation of cold. By this simple experiment we are led to the elements of the pathology of Congestion. Sometimes, and that not rarely, congestion takes place in the larger venous twigs, as in the case of varicose veins of the ankle. In all these cases, there may be more or less pain from the swelling of the parts and consequent compression of the nerves of sensation. The symptoms of internal congestion will necessarily vary with the organ in which it has its seat, a derangement of the peculiar function of that organ being the necessary consequence. Occurring in a gland, it will modify secretion in both quantity and quality. Thus congestion of the kidney produces Albuminuria. Dropsy is a common result

of this lesion, as is evidenced by the daily occurrence of anasarca & ascites consequent on structural disease of the heart and liver. This effusion is, in most cases, serous. That this, however, is not invariably the case will appear from the following remarks of Dr. Williams:- "I have seen the fluid of the pleura and pericardium, in rapidly fatal obstructive mitral disease, ~~of the heart~~ coagulate spontaneously into a fibrinous crassamentum, when removed from the dead body." In congestions of the mucous membranes, where there is no tissue to confine the effused fluid, this same serous exudation which would be dropsy in other situations becomes here a flux. From long continued congestion, rupture of the vessels may finally take place constituting passive or asthenic hemorrhage. Enlargement & softening of certain viscera seems more easily referible to this than to any other morbid action.

So far local congestion alone has been considered, but there is a general congestion which has received the name of the congestive form or type of fevers. That family of diseases commonly called from their locality which they usually prefer, paludal or miasmatic fevers, seem to derive their peculiar character from the pathological

element under consideration. The engorgement of that mysterious viscus, the spleen, found so commonly in all of them, would appear to be partly venous. Then again, the characteristic colour of the liver in bilious fever may be accounted for by supposing the veins crowded with blood, and the biliary ramifications filled with their appropriate fluid. This mixture of the dark blood with the bright green or yellow bile would give all the varieties of bronze and olive noticed in the livers of patients dying of bilious fever. Now, on observing the symptoms of these diseases, it is easy, amid all their individual differences, to detect a strong family likeness subsisting among them. Thus, bilious remittent fever commences with a rigor which runs into a hot stage. This has its daily ebbs and evening flows, and very frequently each exacerbation is ushered in by a feeling of chilliness. In the intermittent fever we have the same periodicity more distinctly marked, and here too, we find more unequivocal symptoms of congestion manifesting themselves during the cold stage. The pulse is small and laborious, the extremities cold, the surface of a livid paleness and the lips blue. All these are still stronger in the comatose or malignant form of the disease, in

which the signs of congestion of the nervous centres are direct and positive. After the chill has lasted some time, reaction comes on, the scales are turned, and, the arterial system becoming excited, we have a fever, which, with the ensuing sweat, is foreign to the purpose of the present thesis. In Congestive or Algid fever, we have the same element still more conspicuous. Here there generally comes on a most terrible initiatory chill of extreme severity, and sometimes very protracted in its duration. Occasionally this is the beginning and end of the disease, and the patient, in a few hours after his attack, is a corpse, reaction never occurring. I have heard of two cases of this kind, both of which happened in one of the southern counties of this state, during the Fall of 1842, a year which, I venture to say, will not soon be forgotten by the physicians of Anne Arundel, Prince George, Montgomery and Frederick Counties. The season was characterized by an unusual prevalence and uncommon severity of the autumnal fevers, and two distinct types of which, the typhoid and the congestive, ~~occurred~~ prevailed in the same neighbourhood, & if I mistake not, sometimes in the same house, at the same time. In the congestive form, the chills would manifest no regular periodici-

ty, occurring apparently capriciously at different hours of the day and different intervals, with very rarely perfect intermissions. Sometimes the first ague-fit would be quite mild, the second rather more severe, while the third very violent would often carry off the patient. In most cases, the reaction was feeble and often broken in upon by irregular returns of ague similar to that with which the disease commenced. The fever, after a few attacks of this irregular kind, if inclined to terminate favorably sometimes assumed the character of a common remittent, and sometimes was converted into an intermittent.

In these three species of fever, we seem to have the same general phenomena, distinguished merely by greater or less intensity of reaction. In Remittent, the stage of reaction is longer and constitutes one of the most prominent features of the disease; in Intermittent, it is shorter and more perfectly completed, while the character of periodicity forces itself more strongly upon our notice; and in Congestive fever, reaction is far more feeble, sooner ended, and sometimes, as I have said, never present. Of the three forms, the latter is generally the most dreaded by both physician and patient. Indeed, every disease in-

to which this general congestion enters as an element, is rendered infinitely more serious by its presence. Thus, in Measles, Scarlatina and Small Pox, the eruption comes out imperfectly, is of a dark, livid colour, and manifests a disposition to retire suddenly, while, at the same time, the constitutional symptoms are alarmingly altered, and the physician begins to tremble for his patients life.

Causes? As the circulation of the venous blood is purely passive, it is easy to perceive how great an influence agents extraneous to the system may exert upon it. Every one must have noticed the swelling of the veins of the hand, when he allows that member to remain, for a length of time, in a dependent position. Here the effect of mere posture on the venous circulation is exhibited. This becomes still more evident in varicose veins of the lower extremity. Persons thus affected cannot remain a great length of time in an upright position without suffering considerable inconvenience. Analogous to this is that malady of the rectum called hemorrhoids, which is referible to the influence of position. It occurs most frequently in sedentary individuals, and is greatly aggravated by certain

kinds of exercise, such, for instance, as riding a hard-trotting horse. Nor are all the disorders produced by mere gravitation of the blood of so innocious a character as those just spoken of. It is by no means uncommon to find some thick-necked, plethoric patient, who has been sleeping with his head too low, suffering with an attack of apoplexy. Sometimes this very influence of gravitation on the circulation is taken advantage of, in therapeutics, where, for instance, a case of syncope is treated by tilting the patient's head down. Nowhere, however, is this effect of posture more distinctly seen than in that variety of congestion denominated hypostatic. This is very evident in the dead subject, the loins, back and all parts of the body which were inferior during the patient's state of sinking, being of a livid purple hue, showing the presence of black blood.

A still more common class of causes is composed of those agents which, by direct pressure upon the veins, interfere with the return of blood to the heart. Thus, a tight cravat may bring on an attack of apoplexy in a person subject to the disease. So too, the pressure of an aneurism, an enlarged liver, or a scirrhus tumour may occasion congestion and consequent oedema in those parts whence the veins in-

terfered with are bringing blood. Diseases of the heart, whether valvular or otherwise, are constantly producing the same result. In phlebitis again, in which inflamamatory action produces a clot which blocks up the cavity of the vessel, ~~disease~~ oedema of the parts below the diseased portion occurs. Pregnancy, in like manner, by the obstacle it offers to the venous circulation, brings on the same morbid state, with the addition of varicose veins. Dr. Williams speaks of atony of the vessels as one cause of this affection. Perhaps, if there be such a cause, it may produce the congestion of the surface sometimes present in typhoid fever.

That mysterious agent, about which so little is known and so much is said, and which has commonly received the appellation of miasm or malaria, appears capable of producing the local congestions of autumnal fevers without exciting fever itself. The liver of a patient, dead of pneumonia, who, during the previous sickly season, had resided in a district where remittent and congestive fevers had extensively prevailed, but had escaped both himself, was examined in the Baltimore Infirmary, in the presence of the class, by the professor of practice in this university. That

gentleman called the attention of the class particularly to the peculiar appearance of the liver which he declared to be precisely that described by Stewardson and other observers as the distinctive lesion of bilious remittent fever. One of the gentlemen from the Alms House, whence the specimen came, observed that there had been another case of a precisely similar character in that institution. This, certainly, would lead us at least to suspect the possibility of what has been hinted at above. It may be long before the question is decided by the anatomist's scalpel, because these cases occur in precisely those neighbourhoods, where the strong prejudices of the people will prevent the resort to any such means of ascertaining truth.

Pathology – Local congestions are simple and easily understood, and have already received sufficient of our attention, but the pathology of the congestive element is a vastly more knotty question. I shall not have the hardihood to attempt to solve it, but, keeping "in my mind's eye" an idea of the cold stage of an intermittent, shall endeavour to trace the succession of morbid changes, as closely as my reason acting on the limited information I possess, will permit me.

Suppose, then, from some unknown cause, an

unnatural quantity of blood is accumulated in the great central veins, what will be the consequence? The circulation on the right side of the heart will be embarrassed. The cavities, overloaded with blood, cannot discharge themselves perfectly. Every systole of the arterial side only increases the difficulty by driving more blood into the already surcharged veins. This reacts on the arteries, and, the balance once being destroyed, matters get worse and worse continually. The arteries have less than their due amount of blood; the heart acts feebly, the right side from being overburdened and the left from being deprived of its ordinary stimulus; and we, of necessity have the weak irregular pulse, indicative of this lesion. The function of the lungs is interfered with; the brain is poisoned, narcotized with venous blood, and reacts upon the lungs, producing still more laborious respiration; the heart acts more and more feebly; the surface is blue and cold; and the patient sinks and dies. In such a state of affairs, is it not probable that as the blood gradually accumulates in the veins, the heart finally ceases to act, partly through the want of the stimulus usually furnished it by the arterial blood.

Treatment — On this branch of my subject I have very little to say.

In local congestions we may expect to derive some good from posture, as we might readily infer a priori, from what has been said of the causes of these congestions. Thus in certain kinds of Dysmenorrhoea, no small advantage is derived from keeping the patient in a recumbent position. Pressure by means of a bandage, or in any other mode, will give relief by supporting the vessels. Friction and Exercise are also serviceable. As for drugs, Tonics Astringents and Stimulants are usually administered in these affections. Dr. Williams thinks that bark, quinine & arsenic can ague by dispelling the internal congestions which play so important a part in the pathology of this disease. How far they act in this manner, and how far they control the nervous derangement which is generally believed to be the immediate cause of ague, is still and, in all probability, will ever remain a matter of uncertainty. Depletion and derivation are also recommended.

In treating the sudden depression attendant on what we have called the congestive element, Stimulation is generally adopted. The intention is to excite the heart to more energetic action and thus overcome the stagnation which exists in the vessels. This re-

thod, having received the sanction of the profession at large, must be efficient in many cases. Another method has been proposed by Dr. McIntosh who bleeds during the cold stage of an intermittent and declares that this treatment has been eminently successful in his hands. In the fever of 1842, already alluded to, both plans were tried. Two patients in my own neighbourhood seemed to me to be actually killed by overstimulation. They were of Thompsonian families, and were dosed with red pepper, composition, No. 6, and other trash till they were too far gone to open their mouths and swallow any more. In others, carbonate of ammonia, brandy, and other stimulants were as inefficient in bringing about reaction, as a candle would be in kindling a flint. The patients died, manifesting no more signs of benefit than if they had been taking so much arrow-root. Quinine sometimes succeeded in breaking the periodicity of the disease, even before a complete apyrexia was obtained; but I have no recollection of hearing of a single case advantageously treated, during the period of Congestion, by stimulation

The evidence I have heard on the other side of the question is a little more positive. But one case came immediately under my own observation.

The patient alluded to appeared to be sinking, having a feeble pulse, sighing, stupor, coldness of the surface, and all the symptoms which seem to call for stimulation. The attending physician opened a vein, the pulse rose, and though but a small quantity of blood was taken, the patient was soon convalescent. I have been assured by several gentlemen that bleeding was very serviceable. One went so far as to say that, in his neighbourhood, no one died who had undergone a vigorous antiphlogistic treatment.

Of course it would be wild to deduce a general law from so limited a range of observation, nor do I desire, in citing these facts, to be considered as combating the established practice of stimulation. They merely constitute a few of the figures which must go to solve, for me at least, this great Therapeutical problem—

Thus have I attempted in a rapid manner to glance at a few striking points in this eminently interesting subject of inquiry. To do it justice would require years of patient investigation & earnest study, in the records of the past, at the bedside of the patient, and at the last scrutiny which Science makes to find the steps by which Life left her now desolate mansions. To

the mere student there, who has but just been indoctrinated into the bare elements of his science, such a subject presents peculiar & uncountable difficulties. These ought to furnish sufficient apology for all imperfections, yet if further excuse were needed, the author of this thesis could truly say that it was in mere compliance with the regulations of the University and not from any suggestion of his own judgement or desire, that he ever gave publicity to these crude remarks upon Congestion.

The End

An Inaugural Dissertation on Congestion

Submitted to the examination of the Provost Regents & Faculty of Physic

of the

Univessity of Maryland

For the degree of Doctor of Medicine

By Thos H. Crane

of

Queen Anne's Co.

Md

Baltimore February 1845

To

Professor Chew

Whose great abilities and many virtues,
have secured to him the confidence and
esteem of all his pupils. I dedicate this
thesis, which is more honoured by his
name, than he is by the dedication

J. H. Crane

Congestion

The phenomena of congestion have perhaps been familiar with all observers in medicine since the time of Hippocrates but to all prior to that important era in the history of medicine which gave to it light & truth and with it fame and immortality to the name of Harvey the knowledge of its pathology must have been extremely fallacious and hypothetical, Until the discovery of the circulation of the blood, of course there could not have existed any correct ideas with regard to congestion But in that important for the advancement of medical science, the road to investigation of the phenomena of congestion, with numerous other maladies, has been greatly simplified

But there yet remains another system of functions which bears a governing relation to the circulating system, and which had been but imperfectly unveiled, and constituted a great impediment to the investigation and deduction of correct principles of its pathology, and though this impediment has not yet been entirely removed, yet

~~however~~ the progress of Physiology lately has better enabled us to comprehend the laws of

The propagation which the circulating system sustains to the nerves is still a subject of inquiry for the Physiologist. From the fact that the action of the heart is influenced by agents acting upon the brain & spinal cord. from similar agents acting upon the ganglionic system and also from its action independently of either of both of these sources of nervous influence it renders the subject difficult to decide from what source it drives its principle governing influence. Thus Valentin found that the action of the heart was excited by irritation of the roots of the spinal accessory nerve from the four first cervical ganglion of the sympathetic. He also thinks he witnessed distinct contractions of the thoracic aorta & of the inferior cava from irritation of the neighboring portions sympathetic system (Vid. Comp. Physiology From all these results and

from the experiments of Dr Gallois and others who found that the heats action was arrested by the destruction of a considerable portion of the centres of the Cerebro Spinal nervous system It was concluded that the heats action was dependant upon its connection with that system. But the more recent experiments of Dr Wilson Philip have proved that the whole Cerebro Spinal axis might be gradually removed without any such result. By others again the heats action is supposed to be dependant upon the organic system. But the most reasonable conclusion would appear to be that as the heart is principally with nerves from the sympathetic system and that its action may be produced by irritation of the roots of those cervical nerves which act through the former that both may serve as means of nervous influence.

There are four varieties of congestion spoken of by authors first action congestion

with which the arteries are principally concerned
secondly, mechanical venous congestion,
thirdly, passive capillary congestion & fourthly
arterial congestion, with which the heart is
principally concerned, and the phenomena of
which has obtained the familiar appellation
of "Congestive fever".

If an irritant be applied to any part of the
body there is very speedily an increased afflux
of blood to the part in which case the arteries
capillaries & veins, each receive a greater quantity of blood than they are accustomed to transmit each set of vessels becoming proportionally distended, during this increased velocity of blood, the change from arterial to venous which is accustomed to be made in the capillary is but imperfectly performed, and consequently the veins circulate arterial blood during this state of things the part which is the seat of the irritation becomes slightly turnid which will gradually increase from the circumbulence

which the instant continues. This has been denominated
active congestion (Vid Watsons Pract.) and is sup-
posed to precede all inflamations. These phenomena
may be supposed to result from a stimulus applied
to some part of the body, which acts upon the afferent
or excitor nerves which transmit this impression
to the cerebro Spinal axis, when it is reflected by
the efferent or motor nerves which are in comm-
unication with those of sympathetic, that
supply the capills of the part irritated, thus produ-
cing the phenomena of active local congestion, a
term properly the congestion produced by a local cau
for strictly speaking all congestions are local, unless
a general hypertrophy of the blood, be admitted as
a species of congestion. Active local congestion
may also be produced from causes acting upon
the nerves of special sense, but not generally to
a high degree, producing moral emotions, for
example as in the blush of shame or anger, we
have the phenomena in question. But active conges-
tion may be produced from general causes

as from stimuli acting upon the system at large,
such is the case when a congestion occurs during the
febrile excitement produced by all the contagious
miasms, and also from the effects of Malaria, but
when it is the result of these general causes, it is
produced in somewhat a different manner, than when
it is the result of local stimuli, in the former
case the whole vascular system is supposed to be
in an increased action just as in the latter the
capillaries of the part irritated were in action, in this
variety the stimuli act equally upon all the sentient
nerves, and consequently, the reflex action is equally
general. Now in order that a local congestion
be the result of this general excitement there must
be a debility existing in some part of the system
a want of due supply of nervous influence con-
stituting a predisposition to congestion such
is the case during our autumnal fevers, we have
a Hepatic, Splenic, Gastric, Centuritic & Pulmonic
congestion from a previous debility of the capill
of those organs. In other cases it might be

denominated, an active congestion. Another form of congestion is that morbid fullness of the capillarys which results from any impediment to the free return of blood from them to the veins, denominated mechanical congestion, with which the veins are principally concerned. A familiar example is seen in the operation of venesection, when the ligature is applied for the purpose of rendering the veins preternaturally full. Many instances are also afforded in disease when the enlargement of an organ or some particular part, produces pressure upon venous trunks. The enlargement of the uterus is a very common cause of it, either from disease or the effects of pregnancy in which case it makes pressure upon iliac veins, thus producing venous congestion of the lower extremities. The force of gravity is also sufficient to produce such congestion in parts of the body in which under ordinary circumstances the circulation through the ~~arteries~~ veins is aided instead of being opposed by that force, which is evidenced when we suffer our heads to hang down

for a short time, are at once the usual conditions of the lips, eyes, cheeks & ears (Watson). A third variety differing in some respects from active or mechanical congestion, is when the capillary systems become loaded and the circulation of blood in them is languid & sluggish without any increased velocity of the blood, or any mechanical impediment. Which is denominated passive congestion. This species is any of those that succeed to the active variety, for after an active congestion of any part the capillary vessels are always left in a relaxed or debilitated condition from the preceding engagement. For it is a law of the animal economy that whenever any organ or set of functions, is excited to a preternatural increased action, by any stimulus whatever that a succeeding preternatural decreased action will be the result, because of the exhausted condition in which those organs are left. It may therefore be concluded that passive congestion may result from a previous active congestion & that it may occur when there has been no increased action of the

arteries, but depending upon a debility of the capillary produced by mechanical congestion, or whatever tends to debilitate those vessels, Thus we often have instances of it in the lower extremities of very aged persons, in which class of individuals, a certain degree of debility is a sine qua non. It is also a very common occurrence after the cicatrization of a long standing ulcer, which exemplify the facts before stated. The fourth and last variety of congestion to be spoken of, is that of asthenic congestion, or congestive fever, which would appear to commence at the heart, and to depend upon an asthenic condition of the heart and arteries. This species make its attack as an ordinary intermittent remittent or bilious fever, and I believe it is now generally considered as a malignant or pernicious intermittent, depending upon the same causes, and consisting of the same pathological changes, and caracterized by the same phenomena only differing in intensity, it is so treated by Dr Bell in chapt. on congestive fever (Vid Stokes & Bells Practice)

The patient for a day or two previous, to the occurrence of the symptoms which denote congestion, experiences lassitude anorexia, pain in the head or side, with slight chilly sensations, succeeded by some degree of febrile excitement, These symptoms may continue from a day to two or three days, when the patient will be taken with symptoms similar to those of the cold stage of intermittent, with this difference that there will not be as great a sense of coldness & shivering, though the extremities be cold, The mouth & throat is extreme thirst insatiable, with great sense of heat about the precordia, with an anxious expression of the countenance the pulse is small & frequent, Respiration hurried & laborious, When death occurs in the first paroxysm as it frequently does, without any reaction taking place the symptoms increase in severity, the pulse becoming more feeble & finally imperceptible & respiration more hurried, when soon coma will succeed and close the scene. But frequently reaction will take place and all the symptoms become mitigated, the pulse become clearer and fuller, respiration easier, and include

there may be a complete suspension of all the symptoms and if proper remedies be used, there may not be any return of the paroxysm. But very generally the interval of repose is but short, all the violent symptoms will again return, perhaps in a more intense degree, or they may not be so extreme & reaction again take place and so the disease may proceede with frequent repetition of the paroxysm, until they are suspended and a cure result, or it be terminated by death

From a comparison of the symptoms it would appear to be very much the same of the congestive typhus of Dr Armstrong, with the difference that the nervous symptoms are more strongly marked, in his cases than in ordinary cases of congestive fever.

The proximate cause of congestive typhus he considers to be an impaired function of the right side of the heart & venous system, producing excessive congestion of blood in those parts, & of the Brain, Liver, Spleen and other organs: which was produced by some remote cause, acting upon the right side of the heart.—

But Prof: Potter was not willing to attribute all of the phenomena to that cause, but considered the left side with the arterial system to be implicated (Vid: Armstrong on Typhus fever & Potters works)

The phenomena of congestive fever may be supposed to result from a diminished action of the nervous system, produced by causes acting immediately upon that system, But of the agents which produce that disorder, we are not so well acquainted, but from this variety of congestion, occuring in districts where the well known influence of Marsh Miasmata is constantly seen in producing the ordinary intermittent remittent, & bilious fevers, I am disposed to attribute to this pestiferous monster the power to create this formidable malady in conjunction with those other diseases which are generally admitted to be the result of its operation, But when this is admitted, we can do no more the modus operandi of such agents in producing disease is still unknown

Although Chemistry has made great advances in the investigation of physical agents & Physiology in the nature of disease, yet to explain the modus operandi of such agents, is a degree in the scale of Medical Science, which has not yet been attained, but remains a portunity to achieve-

Treatment- The Treatment of congestion must vary according as the nature and seat of it may be. But there are two ~~general rules~~ objects which must be constantly had in view in the treatment of each, first to remove the accumulation of blood from the part congested, and establish an equilibrium in the circulation & Secy. to restore the parts which have suffered congestion to their natural tone of which they have been deprived

To accomplish the first indication, the attention should be directed to the exciting cause and if this be discovered, the indication for the remedies to be used, becomes at once apparent-

In the treatment then of the first variety, as it is supposed to result from causes, acting in

different ways, and one very common way in which it is produced is by local stimuli acting upon some of the sentient nerves, and in their turn producing the phenomena in question, we should seek for the initant, and make use of such remedies, as are best adapted for its removal. After the initant has been removed, if we have been successful enough to find it, the next indication is to establish the circulation in the capillarys. One of the most effectual remedies for its accomplishment cæteris paribus is the local abstraction of blood from the affected part, By this means the engorged vessels are at once relieved of a part of their burden, which gives them a chance to resume their former action, But very often we have congestion in parts of the body, where the local abstraction of blood, would not be practible If the congestion be of such intensity as to make us apprehend that inflammation and its phenomena would be the result, general blood letting should be practiced, but

unfortunately, we are seldom apprized of those latent congestions until they have already excited inflamation and from its phenomena only, we have to judge of the preceding congestion, a it may be that the small intensity of the congestion would not require such active treatment, but yeald to milder remedies After the employment of bloodletting, if it has been nessary, or if not, the next means we are to expect the most benefit from, are mild and soothing applications to the affected part, such as have a soothing influence upon the initated parts. they remove the morbid excitement, which exists and thus promote a healthy action in the capillary. One of the most efficient of such remedies is cold applied to the affected part in the way of cold water a pounded ice, It appears to have the two fold effect of allaying the morbid excitement, by its sedative properties and exciting the contractile tissue of the engorged vessels, thus promoting the propulsion of the blood from the part — An Aqueous

solution of opium may be used with similar benefit & other sedatives applications, This plan of treatment is supposed to be applicable to those congestions, which show themselves externally and are most generally the result of mechanical injuries. But when a congestion of some organ, or part occurs within one of the three cavities of the body, which I have before said is the result of general causes acting upon the system at large, and in which case it may be entitled an Active congestion, a more active plan of treatment becomes necessary The exciting cause in cases is not easily removed, for if the cause has not already ceased to act, it will seldom be in our power to remove it; as it is most commonly the result of atmospheric agencies, we have therefore to proceed at once to combat with the deleterious agent, and if possible to fortify the system against its further invasion the means to be used must of course vary as the seat of disease, now there is the same object

in view that there is when the congestion is apparent, and that is to unload the engorged vessels and establish a healthy action in ~~cappillary~~ the part the same plan of treatment therefore just spoken of would be equally applicable in the present instance, But as such remedies cannot be applied so efficiently, & we cannot obtain as clear a knowledge of the case as when the congestion is external, and as all of the internal organs have special functions to perform, it may be concluded that as one or other of those organs may be the seat of disease, so will the treatment require to be varied accordingly

In the treatment then in addition to those means which are acknowledged to have the greatest influence in lessning the afflux of blood to the part, and inducing a revulsion from it such as bloodletting, Tart: Emet: Mercury: the application of cold & counterirritation a cessation of function of the organ affected should be induced, as functional action

must assist in keeping up the congestion, This may be done by excluding as much as possible such stimuli as are known to produce functional action. For instance if there be a congestion of the brain, the patient should be kept as quiet as possible, from any preternatural and as much natural in many excitement as possible from disgustful odours, & from stimuli which produce direct mental excitement

Or if the eye be the seat of congestion, the patient should be excluded from all light, either natural or artificial, Or if the lungs be the seat of the disease the patient should be as quiet as possible, not to engage in conversation or any thing that will increase the respiratory function, Or if the stomach or intestines be in a state of active congestion an almost entire abstinence from all articles of diet, would be essential to a cure—

Thus in the treatment of active congestion the first object is to ascertain as nearly as possible the seat of the disease next the functions of the part, and this information will lead

to what course to pursue with regard to the preceding rules —

In the treatment of mechanical congestion there is but little to do. The removal of the exciting cause is all that is necessary, unless passive congestion in which case the treatment of passive is to be used, which will now be noticed, But first add that as mechanical congestion is most generally the result of some previous disease, which has produced some organic obstruction to the free return of blood by the veins, The treatment of course would be directed to the primary disease, it being the exciting cause. General passive or fillory congestion is one of the concomitant phenomenon of some diseases, as for instance in typhoid fever and other continued fevers, In such instances as these of course it does not deserve any particular attention, as it bears simply the relation of phenomenon and disease. But it is frequently the result of active congestion, and is indeed the worse of it, the former being essentially connected

with an increased action of the arteries & capillary
of the part and consequently an increased velocity
of blood. In the latter there is no increase of the
circulation but a diminished action of the minute
vessels, depending essentially upon a debility of the
part, and therefore it requires an opposite plan
of treatment from the former. Here the vessels
absorbents must be excited by some artificial
irritant and in superficial congestions this may
be accomplished by a regulated stimulus. That
in opposition to suppurs this property to a high
degree, but requires some degree of caution in its
administration, least it be excessive and excite
a morbid irritation. Dry friction if the seat
of disease will admit of its use is a suitable
remedy. Various stimulating lotions & liniments
according to the seat and nature of the disease
such as the Sulphate of Zinc, & Copper, the acetate of
Lead, the Nitrate of Silver, or a more active
class of remedies, as the mercurials, Iodine,
the Deuchinthenates Alcohol &c.

But when there is passive visceral congestion, we must use such remedies as will excite the functional action of that viscus. For as such functional action depends upon & is governed by the action of the secerning vessels of the part. it follows therefore that whatever increases the former must necessarily the latter. Now there is a class of remedies, which are supposed to have a specific influence upon most all the functions of the system, such remedies should be selected therefore as have a specific influence upon the organ affected. in conjunction with those means that have a tonic influence upon the system— The fourth variety that of asthenic congestion— a congestive fever, the proximate cause of which, is before stated to be debility of the heart & arteries, produced by some agent acting upon the nervous system, and that one of the most common exciting agents is supposed Koino Miasmata

In this form there are two indications, to be met first to remove the congestion of blood, from the heart, venous trunks, & organs congested and 2d to restore the natural tone to the heart & arteries

The remedy which is admitted to be most beneficial
in removing other internal congestions and which at first
thought might appear to be appropriate in this cavity
does upon further consideration appear to be inappropriate
nor has experience proved it to be otherwise, when it
be considered that the congestion is the result of
previous debility, and not the cause of debility.
Why should we take away from the system, a
portion of that stimulus which has altogether
proved insufficient to produce the natural irri-
tation upon the heart & blood vessels — It is
said that by this means we remove from the
heart & engorged parts, a portion of the congested
blood, which acts as a stimulus to its contraction
But as the congestion is the consequence and not
the cause, it would appear that if a portion of the
congested blood could be transferred to the surface
of the body, when it is deficient, we would more
effectually obtain that relief, which offers itself
upon the abstraction of blood from the system
and at the same time induce no permanent debility

of the heart and arteries. For not only would the heart be disburdened of its oppression, but at the same time a proper condition, would be established in the extremities and surface of the body, by the natural warmth & stimulus of the blood.

In the Maryland Medical Journal for 1842 Prof. Smith has published a fine on counterjection by means of the tourniquet, which he thinks might be used, with all and even greater advantages than bloodletting, without the disadvantage of that operation that by it more blood could be retained in the extremities from the general circulation, than would be safe to abstract by bloodletting, and which might be permitted to return to the general circulation after the violence of the paroxysm was over, In this way we would procure the natural warmth & stimulus of the blood, in the previous cold & nearly bloodless extremities, and a gentle diminution of those properties in the internal organs, where it is in excess, that is could be procured by bloodletting and without incurring the debilitating effects of

that remedy, which should be an important maxim in the treatment of a disease so strongly marked by debility as is that of congestive fever. When the tourniquet is employed it should be with a view of its modus operandi as entertained by Dr. Smith that is tight enough to prevent the return of blood by the superficial veins but not to compress the arteries, and this undoubtedly was the the way it operated when employed by Mr. Kellie. Its good effects resulting from its inefficiently to the effect intended. Dr. Armstrong was an advocate for blood-letting in the early stages of his congestive typhus, and it would appear from his statements, that the result was more often favorable when this remedy was employed than otherwise. But as Dr. A. always used other very active remedies in conjunction, with bloodletting, such as the warm bath, blisters, calomel & opium, it requires some consideration to say which one to attribute the most beneficial effects. Dr. Bell who considers congestive fever as a modification of intermittent or a malignant variety of the same depending essentially upon the same causes & differing only in intensity

does not advocate bloodletting, but relies upon the treatment universally adopted in the treatment intermittent fever, only differing in being more active It consists of large & repeated doses of the S. Quin. during the apyrexia, opium to relieve the excessive irritability & wakefulness, ice & ice water internally to relieve the excessive thirst and determine to the surface, while rubefacients are used externally & at the same time giving mild aperients and alterative doses of mercury for the purpose of removing visceral obstructions - This Plethora is the practice most generally adopted in the treatment of this most violent affection - Stimulants have been resorted to during the stage of depression, and at first might appear to be strongly called for, but their generally is not accompanied with any benefit, but generally with an aggravation of the symptoms. For the disease after this period is connected with a highly irritable condition of the nerves of organic life which supply the abdominal viscera, resulting from the previous congested state of those viscera, It must therefore follow

from the known modus operandi of stimulants that they can but increase the irritation. Opium in free doses & frequent of cold diluent drinks appear appear to be the best internal remedies in this stage And at the same time frictions & Sinapisms are to be used externally, or the hot air bath a warm bath

If reaction take place and become violent from inflamation attacking some organ, it may be necessary to take blood, and use the antiphlogistic remedies. and as early as possible commence with the administration of Quinine in large doses to prevent a return of the paroxysm.

An

Inaugural dissertation on

Mortification.

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

by

J. D. Beckett, of Prince George County Md.

A candidate for the degree of

Doctor of Medicine.

January 29th 1845

Gentlemen of the Medical Faculty
of the University of Maryland,

It being my duty, in common with all the candidates for graduation, to write a dissertation upon some subject belonging to medicine, I now proceed to do so.

Though the Science of Medicine has, within the last two or three centuries, been greatly improved; - though medical men of modern times have made so many discoveries, by their newly discovered methods of investigation; — though they have been able to arrive at more certain conclusions, than were the older writers; - though the science of medicine, as it was in ancient days, has been, in a manner, remodled; though it has been brought to such a degree of perfection; yet it is very far from being perfect. Though much has been done, yet much remains to be done.

There are many tenets now received and assented to by all, as being true, and which are true; yet there are many subjects about which much discrepency of opinion exists, among the ablest men of the profession. Some are advancing theories, while others are attempting to confute them, the reasoning upon each side being so equally balanced

that it is sometimes difficult to take sides. This is what has been done, and what is doing now.— And such being the case, it could not be expected that one in the rudiments of the profession should have any theories of his own to advance. I have none to throw out;— I know not how it may be with others.

Since I have been engaged in the study of medicine, I have been contented with adopting as my own, such of those maxims, principles, or opinions as, in my humble judgment, were most reasonable and correct. And in the consideration of the subject upon which I may choose to write, I shall only endeavour to speak of it as it has been spoken of, and to treat of it as it has been treated of; and if I can do this in a manner that shall be plain, and easily understood, I shall consider myself quite fortunate.

I will commence my subject, which is

Mortification.

In the first place, I presume it would be more proper to define the term;— to specify that particular condition of the parts effected, which the term is intended to convey.

A part of the body is said to be mortified when (whatever may be the cause) it loses its vitality; — when it dies; — becomes disorganized. The essential conditions of dead parts are a loss of sensation; a drying up of the circulation, and consequently, a loss of heat. The appearances are these, — the parts undergo an alteration of colour, and, from being red, become; mottled, purple, green, or black: they become decomposed; vesications make their appearance, which are filled with dark coloured fluids; a very disagreable odour is emitted; The parts are sometimes very tense, especially when there is a considerable accumulation of fluid, but generally they are loose and flabby:

The loss of sensibility and motion does not necessarily constitute a mortification of parts thus affected. This condition may exist, and yet the parts possess a certain degree of vitality; as in Palsy. The parts may have lost their power of motion; they may have undergone a considerable abatement of temperature; the streams of circulating fluid may have become attenuated; yet they will continue to circulate in a moderate degree, and thus carry on the process of nutrition, and absorption, by which an inferior degree of vitality may be maintained.

for an indefinite length of time, and they may at length be restored to their natural or healthy condition. But "the entire and unalterable cessation of every action and function in the part is absolutely essential in what is understood by the term Mortification."

There is another particular condition by which some parts of the body are liable to become affected, the discrimination of which is of the utmost importance, "as otherwise there would be a continual risk of amputating limbs not altogether past recovery. It is said (Cooper) that there have been cases in which, a complete abolition of Sensibility, motion, and arterial pulsation has existed in parts for several days, after which, however, they have been restored to their natural condition."

This affection is said to be as different from Mortification, as suspended animation is from actual death. This peculiar condition is to be discriminated from mortification "by observing that where the part is only apparently lifeless, the cuticle does not separate as in a case of real mortification, nor does the spontaneous decomposition of the part begin, from which the putrid and intolerable smell, peculiar to the latter disorder, is derived."

According to writers there are several varieties of Mortification. The humid gangrene, which may be described in few words, by adding to the common symptoms and appearances, the formation of an abundance of fetid exhalations and moisture. The dry gangrene is that, in which the parts affected shrink, become dry, and sometimes hard. It differs particularly from the humid in there being no effusion of fluid; and in its affecting those who are of advanced age.

This particular form of the disorder is termed the Chronic or Idiopathic, which is produced by internal causes, severe cold &c The more remote parts of the body are particularly exposed to the last-named cause; as the feet, hands, nose & ears (Cooper)

That which is produced by wounds and other external modes of violence; has received the appellation of Traumatic gangrene.

Gangrene and Sphacelus are used to express different conditions, or degrees of Mortification of parts. And the difference in them is this; - in gangrene the parts are dying, and in Sphacelus the parts are dead. The one is retrievable perhaps, while the other is not.

Besides the different varieties of mortification

which I have mentioned, there is another variety, which perhaps I should have mentioned before. The Hospital or Phagedenic Gangrene, which has the peculiarity of being Contagious, and of being singular in its mode of decomposition. The affected parts, instead of exhibiting the ordinary appearances, are covered with a whitish, or ash-coloured viscid matter, in which there appears at different points specks of blood.

Thus far I have been endeavouring to mention the different varieties of Mortification as may be seen by the Surgeon; all of which are to be more particularly noticed in regular order. These varieties, however, are observed to present differences and Modifications peculiar to themselves, which are determined by the different causes producing them. These different Causes which it is necessary to notice, I will take from Cooper's Surgery. viz.—

Inflamation attended with violence;

Inflammation attended with weakness, whether from a local cause, as certain Modifications of Structure, or from Constitutional causes. Inflammation of a malignant or specific nature, like particular forms of

erysipelas, the carbuncle, boil, small-pox pustule, pestilential bubo &c Great impairment of the constitution, whether brought on by previous disease, as in dropsical or scorbutic persons, or by intemperance, or by a gradual decay of the vital powers from old age &c. Stoppage of the arterial or venous circulation in parts, with or without interruption of the nervous influence in them. Great and severe degrees of mechanical injury from external violence, amounting to what the French surgeons term a disorganization of parts. Applications which immediately and chemically destroy the flesh, like high degrees of heat, lightning, and a variety of corroding caustic substances. Sudden exposure to warmth after intense cold. Particular organic diseases of the heart and larger blood-vessels. Certain deleterious kinds of food, such as the ergot or vitiated rye, or barley mixed with the raphanus. Specific Contagion, as exemplified in hospital gangrene.

"The prognosis of mortification differs according to the nature and inveteracy of the causes of the disorder, and the possibility

or improssibility of removing them".
It is more dangerous when it occurs in those who are old, and whose constitutions are not strong, than it is when it occurs in those who are young and robust. It is more dangerous when the parts effected are of much importance, as a vital organ, than when the disorder occurs in organs of less importance. It is more dangerous when rapid, than when slow in its progress; and the danger depends somewhat upon its extent.
The more fatal symptoms are said to be these; great prostration of the system; a low, rapid, and faltering pulse; a stomach so irritable as to reject both food and medicine; bowels disordered with diarrhea; and when these symptoms are accompanied with coma and delirium.
Now I come to speak of the appearances and symptoms, and treatment of the different varieties of Mortification, as produced by various Causes, which shall be considered in the following order, to wit:- That succeeding inflamation. That produced from injury of large arteries and nerves. That resulting from long continued pressure.

That occuring in persons of advanced age, whose constitutions are impaired and debilitated, and whose large arteries have, perhaps, become ossified. — Senile gangrene. After having considered these in the order above specified, I shall consider the Hospital Gangren, which will conclude my Thesis. Now when a part which is greatly inflamed becomes mortified, or when mortification follows inflammation the symptoms are as follows. The inflammatory fever, which may, and generally does, accompany the inflamed part, becomes very vehement just before the process of Gangrene commences; upon the occurrence of Mortification, however, this fever with its strong action ceases; upon the subsidence of which, the sympathetic irritative fever comes on, which is a very alarming disorder of the system: the Stomach becomes greatly disordered, and consequently vomiting ensues; the countenance assumes the wild and haggard look; the diaphragm is affected with frequent spasmodic contractions, by which is produced loud and troublesome hiccough; the pulse becomes irregular, small, and rapid; and when this inflammation is produced by external viol-

ence, the brain is apt to become affected with coma and delirium. Cold and clammy perspirations appears on the surface of the body, and thus the patient expires, if the disease is not checked in its progress by the intervention of the Surgeon. Of these symptoms, it is said, that the hiccough is worthy of particular notice, being almost constantly excited on the first approach of gangrene. Now the different appearances assumed by the part undergoing this process of mortification (some of them have been noticed on a previous page) are these; — the epidermis becomes separated from the parts to which it was attached: it becomes softened, and acquires a blackish hue; vesications appear, — filled with bloody serum. The different textures undergo decomposition, so as to occasion emphysema and crepitation, which are very perceptible to the touch; an abundance of moisture and fetid exhalations are formed.

These are the symptoms and appearances of mortification accuring as a sequil of inflammation; and now I shall proceed to the treatment of this variety.

Now one of the first indications to be fulfilled

is, to check the progress of the disease:— to stop it, if we can, before it shall have advanced very far. If it is only gangrene, it should be checked before it becomes mortification, if it is in the power of the surgeon to do so. If this can be accomplished a considerable degree of good is done; but if this cannot be done, we must act according to other indications, and afford as much relief to the patient as it is in our power to do.

As this variety of mortification is the effect of inflammation, we must strike our blow at this cause. This is what has brought about this strong tendency to gangrene, and, therefore, to prevent the gangrene we must act with all our vigour upon the inflammation; but in doing this we must see what has caused this inflammation to spring up. We must search out, if we can, the prime cause of the whole disorder, and, if we find it, we must remove it; and, having removed it, we must try to use up the inflammation. The cause of the inflammation may have been removed;— it may have ceased to operate, and yet the inflammation may, and sometimes does, continue to increase; in such cases then we must look to the

inflammation and forget the cause, for the good the remembrance of it will do us. It is frequently in the power of the surgeon to remove the cause of inflammation, and in doing this he may, in a majority of cases cut short the progress of the gangrene; especially with auxiliary measures.

In a case of extravasation of urine, in which gangrene rapidly supervenes, it may be prevented by a timely incision, by which the urine may be let out; and by keeping it in its proper course, by means of the catheter. This is a case in which we can remove the exciting cause of inflammation, Another is in taking away other foreign substances; as pieces of splintered bone, or fragments of wood. These are cases, in which, the surgeon can remove the causes of inflamation, and which common sense would dictate to him.

The progress of gangrene may be checked by a change in remedies, when they are observed to encourage or produce sloughing, which has been the case quite often. Perhaps after all of our efforts to check the progress of the disease at its commencement, by the removal of exciting causes &c the inflammation still persists, and mort-

-ification has actually commenced, and the living circumjacent parts are observed to be intensely inflamed. These conditions, it is said, point out the necessity of the antiphlogistic plan of treatment. Bloodletting is indicated; but before this is done we must consider the condition of the constitution. We must remember, that, in cases of mortification of a considerable portion of the body, the whole constitution is severely shocked; the blood seldom circulates through the system with preternatural force; the whole nervous system is in commotion; that great prostration is a predominant symptom; and that debility rapidly supervenes. By remembering these facts we will be warned to proceed with great caution, in drawing blood from a vein. In fact, bloodletting is said to be indicated only in young and robust subjects; and in which inflammatory fever and acute local inflammation are co-existent with mortification: — Even in these cases we are enjoined, by writers, to proceed with great caution. — But to go on — Bark was a remedy of great repute with the older surgeons, but it appears now-a-days to have lost its specific virtues. Yet it is found useful in some cases, and may be

used with great advantage in particular states of the system; especially in the latter stages of the disorder when the patient is on the mend. It does good by improving the tone of the stomach when given in moderate quantities. We will not deal so heavily in barks in these cases, however, as did the older Surgeons. But further. ——
In case the system should be very much depressed, and it is very generally so, especially when the parts are actually sphacelating it will be necessary to administer such medicines, as will tend to counteract this condition: — Stimulants are indicated, such as wine, Ammonia, Camphor &c. These will be observed to exert a very beneficial effect. When there is extreme suffering from local pain, which is most common in those advanced in years, and whose bloodvessels are diseased, Opium and Calomel administered conjointly are said to be very good. Opium is said to be one of the most valuable remedies that can be used in this affection. It may be used with advantage in almost every stage of the disease, especially when there is pain, spasmodic or nervous symptoms. I will close the constitutional treatment by a few lines from Cooper, the

the substance of which I believe is above,
"If the fever be what is called sympathetic
irritative, and great excitement of the ner-
vous system, delirium, picking of the bed-
clothes, subsultus tendinum &c prevail, anod
-ynes, antispasmodics, blisters and local tre
-atment" are more certainly indicated than
any other remedies. — Now comes the lo
-cal treatment which can soon be done with.
Out of all the applications that have been
applied to parts thus affected, emollient
poultices and fomentations have been found
most suitable. The linseed poultice with
or without a proportion of finely powdered
recently burnt Charcoal is a good application.
The fermenting poultice does not seem to deserve
much notice: — they appear to be better
calculated (Cooper) for mortification unatten
-ded with intense inflammation.
The common linseed poultice is also very good
to promote the separation of the dead from
the living parts. It is also good to apply
this same poultice when the sloughs have
fallen off; in order that the granulations,
which are now being formed, may be kept
soft, which would otherwise be an additi
-tional source of irritation.
When the granulations assume an unhe-

-althy appearance, and when their healing process does not fully progress, it will be necessary to apply some stimulating powder.
I will now notice another variety of mortification and the next is, that which results from the injury of large arteries veins and nerves.
Without discussing this at full length, I can say that Mortification will follow, very often, the injury of such parts, especially when they are all injured at the same time, and the injury of these vessels is accompanied with much Contusion and laceration of the surrounding soft parts; when blood is extravasated into the surrounding parts; and when the constitution suffers from a sudden and profuse lop of blood.
But when the injury consists in the simple division or tying of a large artery and nerve, unaccompanied with injury of the soft parts, these dreadful consequences are not so apt to follow; — though it is not impossible.
It is also much more apt to follow if the patient, in which this accident occurs, is advanced in life; — under which circumstances the circulation is not very vigerous.
When it does occur, however, the following appearances present themselves, as stated by Samuel Cooper. The part is from the first

cold and insensible, heavy, benumbed and motionless; its natural heat is permanently lost; the pulsations of the arteries cannot be felt; the cuticle separates; the skin becomes brown and shrivelled; and fetid exhalations soon leave no doubt of the nature of the mischief. These are the appearances which manifest themselves to the Surgeon; and which are dangerous according to the rapidity of the progress of the gangrene.
If it is rapid, the whole limb, and the life of the patient are in great danger: but, if it comes on and advances slowly, it is said that the destruction may be partial and the limb may be saved. Here the Surgeon must be very vigilant, "lest in his anxiety to avoid operating, he give the disease time to extend up the limb" which will be certain to cause his death. If the Surgeon see the Sphacelus going up the limb, he must make himself perfectly easy if he wants his patient to die; but, if he does not want him to die, he must go to work and cut his leg off, if possible, above the place where the vessels were tied, - for this is the only way by which he can save him under these circumstances.
This is what we must do when mortifi-

-fication actually occurs and proceeds up the limb. But our great object must be to prevent, if possible, (and it is very often in our power) this unfortunate occurrence. How is this to be done? It can be told in few words. When we undertake to put a ligature around an artery, we must take care not to include its accompanying nerve; and if the nerve has made its escape, we must still take care to promote the circulation of the blood in the collateral branches. This may be done by keeping the limb moderately warm, and free from pressure. This is what we have to do in these cases.
Before I consider the other varieties of this disorder which I have mentioned, I believe it would be more appropriate to consider the question of Amputation in cases of Mortification; which shall be done as briefly and as gracefully as I know how.
In some cases of mortification of an extremity the necessity of amputation is very evident. Because, though the disease may go through the regular process of separation and sloughing through the patient may live until this shall have been accomplished; yet the constitution most generally gives way before it is completed: it generally proves too much

for the powers of life. Another reason is, that if the patient should live until the part or limb shall become separated, the stump, if it is a limb, will be very imperfect, the cicatrix will be tender and incapable of bearing pressure. To get a good stump, therefore, is a good reason why amputation should be performed: — the other good reason is to avoid the risk of losing life in waiting for the natural separation of the part. As to the time when amputation should be performed, It seems to be unsettled yet. Some say it should not be performed untill the red line of separation makes its appearance; — others say dont wait for it. From what I can draw from authors, both of these rules hold good in some cases. The cases in which we must not wait for the line of separation, are those which follow wounds and external violence or injuries. or the traumatic species, this, according to Cooper, is Baron Larrey's plan and is considered to be good. And the operation is more certainly indicated when large bloodvessels or nerves are injured. An example of such a case, is a gunshot wound, in which an artery veins or nerves are wounded and the surrounding parts are contused & lacerated.

This other rule of waiting for the red line to appear, is said to be good in cases of mortification arising from Constitutional or internal causes, and it is said, that if this is not attended to the stump is liable to become gangrenous.

The next variety of Mortification to be considered is that resulting from long continued pressure. This pressure may be applied under different circumstances; as the application of a tourniquet, or the application of a bandage around a limb. Mortification is readily brought on by either of these modes of pressure.

It may also be produced by the enfeebled patient, who has been long confined to bed, lying too long in one position. The Sacrum, the os ilium; the trochanter major and the Scapula are the parts generally affected in these cases. The surface thus affected is at first very limited; then it spreads more or less widely. When it results from pressure on the whole circumference of a limb, it commences at the extremity and goes thence up the limb. Parts about to become affected in this way become soft, lead coloured, red at the circumference, edematous, and, at last black and senseless; and, at length a foul, ill conditioned, gangrenous ulcer is the result.

In regard to the treatment. — When gangrene has actually commenced in a limb from pressure by a tourniquet, or bandage for instance, the Surgeon must be on his guard, and if the disease is observed to proceed up the limb, the compression being removed, amputation must be performed in order to save the life of the patient. But if it is only partial, let the parts be fomented, and let the changes which occur be carefully watched. When sloughing has taken place in a part in consequence of the patient lying too long in one position, the treatment is this: the position of the patient must be altered, and soft pillows must be properly adjusted beneath him: the constitution must be improved and strengthened; the parts must be kept clean; they must not be irritated; — as to applications; — some apply emollient poultices; others lint dipt in camphorated spirit or turpentine; — others again a solution of opium and Common Pledgets. This is what must be done in these when this disorder is actually existing. But the most important thing to be done here, is to keep the mortification off, and if we always do this, we will never have this variety to treat.

It may be kept off by occasionally altering the ~~condition~~ position of a patient, long confined

to his bed by disease; by carefully noticing the parts exposed, and on the appearance of any redness or discolouration in them, they should be bathed with the liquor plumbi acetas dilutus, and covered with a piece of the Emplastrum plumbi vel saponis. When also the tourniquet or bandage is to be used, the case must be carefully watched, and upon the first appearance of any bad symptoms, or when there is much pain, they must be removed, and recourse must be had to fomentations, or applications of a discutient or spirituous quality.

I will now consider that variety of mortification, which occurs in those who are advanced in life; who have been high livers, especially in the way of eating, by which their constitutions have become impaired.

This is a most singular affection. It commences by a burning sensation, or by some peculiar uneasiness in the parts, without any appearance, for sometime, differing from that which is common to the whole surface of the body. At length a small discoloured spot may be observed, on one of the toes or fingers, for these are the parts which are always first attacked, which may for sometime be unnoticed as being of a serious nature. Thus it begins, and when the destructive effects

the disease, or the disease itself is fairly establis-
-hed; and before it gets very far up the limb
the patient dies.
For the treatment opium has been recommended
to stop the progress of the disease, if it is possible
to so by any means. Wine, Camphor and ammo
-onia have also been recommended; - Amput
-ation also which, however, seldom saves
the patient's life.
Now I come to consider that variety of Mo
-rtification which is most singular of all,
and which is, perhaps, the least understo
-od of all: — The Phagedenic or Hospital
Gangrene. Such a disease has existed with
very destructive effects, among soldiers, sailors
and in Hospitals. It is very rare now-a-days.
It commences in this way; - a slight abrasion
of the skin, or the surface that is exposed in
amputating a limb; - a small and simple ulcer
is attacked, from some unknown cause, with
a very violent degree of inflammation, which is
rapidly succeeded by gangrene and sloughing;
- the slough becomes separated, and we may
see the healthy surface from which the slough
was detached, suffer the second attack of
inflammation, gangrene and sloughing; and
thus the patient is sometimes destroyed. Sometimes

however, they escape death, but it seems to be uncertain which of the remedies, used in these cases, done the most good, or whether any of them exerted any beneficial influence.

Sometimes the granulations have assumed a healthy appearance, but so many remedies were used in the treatment of the case, that it was doubtful (Fergusson) whether any of them brought about this happy change. Now, as regards the treatment that should be, or that has been pursued it is difficult to determine exactly.

When the system is much depressed or sinking, stimulant and tonics are recommended. The parts should be kept clean: change of food and air must be attended to also. Of the external or local applications, — Caustics seem to stand highest; the most powerful of them are recommended; the actual cautery itself has been found to be good; — the good effects arising from them seems to be owing to the alteration which they bring about in the granulations; — they are made to assume a more healthy aspect; and when this is done they must be treated as other sores arising from other causes.

Gentlemen, I am done, and if I have misstated or misconstrued any of the opinions of writers, be kind enough to tell me, that I may learn better. Please excuse the many errors to be found. That the blessings of the God of Heaven may be yours, is the prayer of ——————— Truman D. Beckett

An

Inaugural Dissertation,

on

Diseases of the "Medulla Spinalis,"

submitted to the examination

of the

Provost, Regents, and Faculty of Physic,

of the

University of Maryland,

for

The Degree of Doctor of Medicine,

Session 1844-'45—

by

Alfred Baker,

of

Baltimore. Maryland.

Dedicated with respect,

to

Samuel Chew. M.D.

Professor of Materia Medica, Therapeutics, and Hygiene,

in the University of Maryland,

in grateful testimony

of the relationship, existing between him,

and

his faithfully-attached pupil,

Alfred Baker.

The purpose of these pages is a short, and therefore imperfect consideration, of the diseases of the Medulla Spinalis, and its membranes, but the shortness of this thesis, is by no means the only cause of its imperfection; for notwithstanding the light, shed around the true pathology of all disease by the devoted, and ardent medical observers of our own day, this subject is still obscured for want of further research.

The ancients, considering the spinal chord as the seat of convulsions, and paralytic affections, attached unnecessary importance to its diseases, while the pathologists of later days have gone into the other extreme, pronouncing its diseases rare, and unimportant.

If the practice at this day were more general, of examining all parts of the human system in all autopsies, we would no doubt learn with astonishment complications, which are now little suspected; and possibly we might find lesions of the spinal chord, which would surprise us, by their frequency, and importance.

There are difficulties, which attend the post-mortem examination of the chord, which account for the neglected observation of its pathological lesions, but these obstacles have already vanished, before an Andral, ~~and~~ the two Franks, Lallemand, Ollivier, Abercrombie and a few others, the result of whose laborious researchs is all that I desire to give in the following pages.

The position of the Spinal Medulla shows what care nature has bestowed for its preservation and protection, enveloped in a firm bony compact wall, consisting of separate bones, lashed together by strong

ligaments, and the delicate sub-arachnoidean fluid constantly exercising equal pressure on all parts of its structure, it seems peculiarly guarded from all external danger.

But even this bony canal, while it is intended to support, and protect, brings upon the chord some of its most alarming diseases, for when displacement of the vertebrae, either from slow disease or accident, causes pressure on the chord, we first have all the painful symptoms caused by irritation of the spinal medulla, then the more violent ones marking inflammation, and finally the terminations of that inflammation, causing paralysis of the extremities, loss of power over the sphincters, and other symptoms differing with different parts of the chord. The disease of the bone may be arrested, but the patient goes through life helpless, and blighted, by all the painful attendants, of a permanent lesion of the spinal chord, indeed the protector

has now become the destroyer, as when the storm lays low some lofty oak, it crushs with its fall the parasitic vine, which clung for support to its bosom, and twined its arms round its wide spread branches, for nursling care.

In its structure, the spinal chord is analogous to the brain; it is composed of cortical and medullary substance, both, more dense than the brain. It is divided into four columns, the two anterior of which take their origen from the crura cerebri, and the two posterior from the crura cerebelli. The spinal nerves arise by two distinct roots, from one of the anterior and one of the posterior of these columns. The former are called motor, giving origen to motor roots of spinal nerves, and the posterior are nerves of sensation, or those by which the spinal chord receives impressions.

The membranes of the chord correspond to

those of the brain. The dura mater adheres but slightly by a loose cellular tissue to the canal of the vertebrae except at the foramen magnum where it is firmly adherent, so that there is no communication here with the cavity of the cranium, and effusion found here, (between the bony canal and the dura mater) must be the result of inflammation of the membranes of the chord. The Arachnoid gives a serous layer to the dura mater, and forms a loose covering to the chord, it constitutes a sheath for the spinal nerves on each side. The space here however between the Arachnoid and the Pia mater, has free communication with the brain, and the effusion found here is as frequently the result of inflammation of the brain, as of ~~from~~ the spinal chord.

The immediate envelope of the chord, (Pia Mater) is more dense, and firm in its character, than the corresponding membrane of the

brain, it is reflected into the two sulci-

We see in the diseases of the Spinal Medulla, and its membranes the respective inflammation of fibrous, and serous membranes, as also those of nervous structure - unfortunately the symptoms peculiar to the several membranes of the chord present no marked diagnostic difference. But let us remember that after all the study, and research of so many great minds in the investigation of diseases of the cerebrum, we have now no constant and certain symptoms, by which to distinguish diseases of the brain, from those attacking its membranes - We must therefore be content to speak first, of Inflammation of the meninges of the spine (spinal meningitis) with its symptoms, pathology, and treatment; and afterwards of the inflammation of the body of the chord, ~~by~~ the symptoms by which it is marked and finally the various terminations of that inflammation-

The peculiar function of the Spinal chord is its property of exciting motion by its reflex-motor power, by which an impression, transmitted along the sensitive nerves, independent of the will, excites motion through the corresponding motor nerves. And as the Spinal chord has nothing to do with the intellectual powers, we will find diseases of the Medulla are not so complicated as those of the brain: their general pathology is very analagous, but their Symptomatology is different, except that in both we are deprived of the sense of sight and touch, and the ear can here distinguish, no manner of complaint.

Spinal Meningitis-

The symptoms of this disease are often obscure at the commencement, there is general febrile excitement, with a feeling of uneasiness in the limbs, and there exists at the same time "constipation, dysuria or even a retention of urine, slight pain in the back confined often to the lumbar region, extending

to the lower extremities - But the two symptoms, which are considered by Ollivier as diagnostic of Spinal Meningitis, are first, contraction of the muscles of the posterior part of the trunk, varying from simple rigidity, to violent contraction, or real opisthotonos - It has been this curve to exist where the autopsy showed that the inflammation was confined to the meninges of the spine - The second diagnostic symptom is pain, of such violent character as cannot fail to arrest the attention of the physician, and to show him the importance of the disease. It is confined to the spine, sometimes darting and intermittent, there is a morbid exaltation of the general sensibility, and this constant symptom enables us often to distinguish the disease of the Membranes from the inflammation of the body of the Chord, in which there is a complete abolition of sensibility - The respiration is affected, if the disease occurs at the upper part

of the chord; ~~the respiration is affected~~; the pulse in most cases is regular, while the action of the heart is strong. The patient is liable to profuse sweating and complains of great lassitude, but the mind is free; the affection of the bladder is a constant symptom during the whole course of the disease.

The causes of this disease are various, exposure to extremes of heat and cold, ~~by~~ injuries, blows, or violent exertions of any kind; it is also said to be more common in rheumatic habits. Cases are reported of this disease arising from external injury without any affection of the bones of the spine resulting. If the disease pursues its course, these symptoms gradually give way to paralysis which may occasionally be complicated with convulsions and delerium consequent upon the extension of the disease to the membranes of the brain. Cerebral Meningitis seldom communicates itself to the membranes of the spine.

The pathological lesions of this disease are similar to the post mortem appearances of the membranes of the brain. The dura mater of the chord is said to have been found inflamed and as a consequence of this adhesion between the serous reflexion, lining the dura mater, and that, corresponding to the pia mater of the chord. And again between the canal of the vertebrae, and the dura mater, an effusion is often found which must result from Inflammation of the dura mater; many of these cases were accompanied by paralysis. Lesions of the arachnoid are rare if they exist at all; this membrane seldom loses its slight secretion, which gives to it, its high polish. Effusions of serum into its cavity has been observed, but often on cutting into the Dura Mater we find "a yellowish, opaque membraniform exudation, varying in thickness and consistence, sometimes continued the whole length of the chord, sometimes forming detached and

separate patches. It appears at first to be in the cavity of the Arachnoid, which however is seldom even inflamed, the purulent exudation being always subjacent to the arachnoid, the tissue around this last membrane, being always injected" (Olivier). Cases are related of effusion of blood found between the Arachnoid and Pia Mater, causing convulsions. (Magendie). The pia mater of the chord presents all the changes found in that of the encephalon, but the former is much less frequently diseased than the latter. It is in this membrane that we most frequently find marks of inflammation in cases of Spinal Meningitis.

Several cases have been described by Martinet, and Duchatelet, of inflammation of the membranes of the chords terminating by puriform deposition, but they were in general complicated with similar disease in the brain. The prominent symptoms in these cases were pain in the back with tetanic spasms. Thickening is not an uncommon termination of inflammation

of the membranes. In one case which occurred after a fall, the patient complained of weakness of the limbs, which ended in paralysis, he also lost articulation, on examining the body after death, which was sudden, the membranes of the chord were found thickened, and the membranous coats of the cervical nerves for some distance were found thickened, and dense— A case is mentioned by Abercrombie of one who died from Epilepsy of five years standing, in which the sheath of the spinal chord was found distinctly coated with osseous scales, through its whole length— in some cases the chord is compressed by a diminution of the spinal canal— Olivier has remarked that fungoid disease of the dura mater is often found connected with disease of the vertebrae— It is thought by some that the disease called Tetanus is the result of inflammation of the membranes of the chord, it is true that in some cases, which have died of tetanus the membranes have been found injected, but

in as many others, the membranes have been found perfectly healthy so that although, this is not a constant lesion of this disease, still from its occassional presences, the coincidence is worthy of remark;— that it is dependent upon some lesion of the nervous centres, its symptoms declare; but what that lesion is we can only express by the terms ~~of~~ irritation, modification of function &c &c——

The prognosis of spinal meningitis is grave, but if the disease is discovered early, and treated actively, the patient may recover. The treatment of the acute variety says Olivier, consists in recourse at once to copious general bleeding particularly in the young and vigorous, to this, which is to be repeated as occasion may demand, must be added local bleeding, by means of leeching, or cups along the entire of the vertebral column. The cold applications, ice, affusion of cold water, which are so advantageous in cerebral meningitis must be equally so, in an inflammation seated in a similar part——

When the inflammation is chronic, rubefacients and blisters have been found serviceable. The same may be said of the cautery and of moxas. With this should be combined emollients and gentle laxatives drinks, laxative lavements may also act advantageously as derivatives. Distension of the urinary apparatus may be prevented by sounding the bladder frequently in the course of the day.

The congestion of the veins of the spinal chord which are without valves, may be caused, by the suppression of the menses, or any habitual discharge, and often by sexual excesses; the symptoms are pain along the spine, loss of power or paralysis of the voluntary muscles, confined in most cases to the legs, commencing with some perversion of the sensibility, cramps and twitchings. Duration of the congestion is short and quickly relieved by bleeding, general and local, purgatives, and blisters, together with removing the original cause of the disease if possible. The increased vascularity of the membranes about

the exit of the nerves through the intervertebral foramen causing pressure, and thereby producing irritation, is said to be the cause of various anomalous pains in the thoracic and abdominal viscera, as also various nervous affections, the changes in the viscera first throwing the blood with undue violence upon the vessels of the chord. Indeed the treatment of various pains in head, abdomen and thorax by local blood-letting, or applications to the spine, has been attended with marked relief, and success, in so many cases, as to demand attention and observation from the profession.

In the cold stage of intermittents, the chills running down the spine, are said to be caused by the local plethora, at the exit of the spinal nerves, and local blood-letting to the spine has cut short the chill, and prevented the paroxysm. The free communications of the sympathetic might well teach us, how irritation of the spine may cause pain and disturbance in some distant viscus. The absence of any morbid appearance after death may

be accounted for by the subsidence of the spinal congestion with life. This congestion of the veins if long continued may be the cause of dropsy without the occurrence of any inflammation, thus we account for these cases of incomplete paralysis of the extremities, which are so quickly removed by local stimulants to the spine.

There is a disease which is called Spinal Apoplexy it consists of an extravasation of blood generally in the central grey substance, sometimes exterior to the dura mater, the pathology is like the similar disease in the brain, the symptoms are sudden accession of pain near the diseased part, and sudden paralysis of the voluntary muscles, supplied by nerves going off below the seat of extravasation, the disease is occasionally the result of accident as by a blow on the back, or violent straining in lifting heavy loads, the treatment is bleeding, purgatives, and cold applications and resort to the use of mercury, it is seldom successful. Olivier has seen Epileptic convulsions caused by extravasation at the upper part of the chord.

A common consequence of blows or falls on the back is Concussion of the spine. The patient without suffering fracture or injury of the vertebrae, loses the power and use of the lower extremities, and is unable to void his urine. If the injury be inflicted on the upper part part of the spine, paralysis of the upper extremities may occur, as well as dyspnoea, and affections of the voice. In many of these cases death occurs, but there are no morbid post mortem appearances. in others the concussion has caused inflammation, followed by softening, effusion, or degeneration of the chord. Sometimes the most urgent symptoms decline, and the patient gradually recovers perfectly, or he may be left with Permanent paralysis. Treatment as in the brain.

Myelitis or inflammation of the substance of the chord is not a common disease, its most common result is ramolissement, circumscribed, most often confined to the lumbar region, then to the cervical portion, and sometimes limited to the lateral halves. The symptoms have been thought to differ

as the softening ~~as the softening~~ was limited to the grey matter, or extended through the whole thickness of the chord, but there are no symptoms common to either. This softening sometimes degenerates into a mere puriform fluid, so that the chord is altogether disorganised. Again we have distinct abscess of the chord, with the particles of the chord in a state of induration.

Induration occurs as the result of chronic inflammation, sometimes the chord is found to have the consistence of cartilage.

A case is mentioned by Ollivier of "destruction of the medulla for the space of four inches, so that the membranes there formed an empty bag"—

in Magendie's journal a case is mentioned, in which the spinal chord had become quite liquid through two thirds of the dorsal region—

It is not unfrequently the case that the chord wastes or is much diminished in size, and this was accompanied by permanent contraction of all the limbs.

The symptoms of acute inflammation of the substance of the chord are at first obscure, slight numbness of the toes, and fingers, some difficulty of motion. In Spinal Apoplexy or Spinal Meningitis, there is pain on motion, but in Myelitis there is only dull pain in the spine. These symptoms are quickly succeeded by paralysis; obstinate constipation occurs early in the disease with retention of urine and a peculiar sense of tightness around the belly late in the disease, there is incontinence of urine and feces with great febrile excitement. If the disease is situated in the cervical portion of the chord, we have violent action of the heart and dyspnea. It is caused by falls and shocks, and occurs frequently in the rheumatic diathesis. A cause of this disease which has frequently been the subject of general remark is sexual excess, how to explain it, we are unable, except that it results from the frequent congestions of the chord which occur in coition. It is unfortunate and sad that this is by far the most common cause of this disease—

The very acute form of this disease destroys life speedily, particularly if situate at the upper part of the chord.

Chronic Myelitis creeps on insidiously, at first causing slight pain in the back, and a creeping sensation, over the extremities (formication) these are the early symptoms together with slight weakness in the legs which after a long time give way to paraplegia. The disease is slow, but finally terminates fatally -

Treatment consists in removal of the primary cause if possible. Inflammatory symptoms require blood-letting, the bowels and the bladder must be attended to, and strict rest is required - The decale cornutum has been highly recommended as causing spasmodic action of the legs and abdomen. Also the Strychnine which occasions spasm in the paralysed muscles -

The Spinal Chord is often compressed by foreign growths and formations, springing from its own structure - It is occasionally the

seat of fungoid disease, which presses upon its structure producing Ramolissement, and utter disorganization. Tumours of various size and appearance have their seat in the chord. One, of a reddish brown colour, about three lines in thickness, which covered the whole anterior part of the chord was of a firm fleshy consistence. The symptoms, which they give rise to, are similar to those of any disease causing pressure on the chord, and unfortunately nothing can be done to arrest their fatal progress.

I must next mention the occassional development of Tubercle, this fatal formation too often chooses for its prey, organs of the highest importance in the animal economy. Their size is variable, even as large as a nut have been found, the symptoms they give rise to here are generally masked by the more apparent ones marking their presence in the lungs, except they attain large size, or press on important nerves, when they are attended with violent pain, oppressed breathing &c &c

Hydatids are occassionally found in the Spinal Chord "a woman is mentioned by Esquirol, who became Epileptic after a fright and the fits returned every second or third day, with great violence for three years: She then became comatose after one of the paroxysms and died in five days. The pituitary gland contained a cyst, full of a reddish brown fluid, and hydatids of various sizes were found within the sheath of the spinal chord through its whole extent. Some singular cases are mentioned of recovery from wounds, which pierced the spinal chord. One by Desault of a man who lived twenty four hours, and moved all his limbs freely, after the chord had been divided by a musket ball at the tenth dorsal vertebrae. Another case of a man who received a sword wound, between two of the lower dorsal vertebrae, the wound healed and the patient was able to bear long marches; after a considerable time the wound suppurated, and a piece of sword

two inches long, was extracted from the wound, which 27
was found on examination after death, to have
traversly the Spinal canal, & to have wedged itself
on the opposite side.

As one of the most frequent causes of
Inflammation of the Spinal Chord, and its consequent
Symptoms, Palalysis and pain in the back, deserves
to be ranked caries of the vertebrae, from the distortion, by which many
pressure on the chord, and from the proximity of
the suppuration. Before any deformity occurs,
extensive inflammation of the bones may have
taken place, and even anchylosis, so that we must
have some other means of judging, besides the
distortion; tenderness on pressure over the affected
part is said to accompany the early stages of the
inflammation, and upon being repeated with
slight force has won caused Syncope. It is true indeed
that the most formidable disease may exist in the
chord, and its membranes, or extensive caries of the
bone without any symptoms, which marks the
disease in the one or the other -

The important phenomena, accompanying this disease are thus summed up by Doctor Abercrombie "In reviewing says he the phenomena, which have been observed to accompany the diseases of the Spinal chord, we find affections of all the principle organs of the body - In the parts connected with the head and neck we find distortions of the eyes, convulsive affections of the face, difficulty and loss of speech, loss of voice, contraction of the jaws, resembling trismus, and difficulty of swallowing, which is said in some cases to have nearly resembled hydrophobia - In the viscera of the thorax, there have been observed oppression, palpitation, and strong and irregular action of the heart, painful sense of stricture in the region of the diaphragm, and difficulty of breathing, which in some cases has been permanent, and in others, has occurred in paroxysms, resembling Asthma. In the organs of the abdomen and pelvis we find vomiting, pain of the bowels, resembling colic; tenesmus, involuntary discharge of feces,

and retention a incontinence of urine. In the muscular parts we observe convulsions and paralysis; the convulsions in some cases resembling chorea, in others tetanus - in the state of our knowledge we cannot say that all these proceed directly from the affections of the Spinal chord, especially as we observe remarkable diversities and considerable want of uniformity - But the subject presents to us a field of observation, which promises most important and most interesting results."

Although sixteen years have elapsed since these last words were written, the field for observation is still open, and although during that time, the examination of medical subjects and medical cases, have been undertaken with new interest and new industry, we must look to the labours of the humble and untiring of this day, aye and of ages yet to come, to dispel much of the mist, which still invelopes these deeply interesting diseases of the Medulla Spinalis and its membranes.

An

Inaugural Dissertation

on

Pleurisy

Submitted to the Examination of the

Provost, Regents and Faculty of Physic

of the

University of Maryland.

for

the Degree of Doctor of Medicine

Session 1844 & 45

by

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of

Baltimore

Md.

To John A. Wood M. D.

Senior Student and Resident Physician
of the Baltimore Infirmary.

In consideration of his
disinterestedness as a friend, his skill as
as Physician & his integrity as a man, this
Thesis is respectfully inscribed by his
Obedient Servant
The Author

Pleuritis

Any disease which directly or indirectly offers an impediment to the important function of respiration, naturally awakens our attention and excites our interest. Any thing which seriously embarrasses the natural and easy play of the lungs must be productive of great distress and if of long duration must ultimately terminate in fatal consequences. Hence the anxiety with which these affections are instinctively regarded even by the unprofessional, and the prompt and speedy resort to the skill of the physician, which they in these more than in almost any other class of diseases practice. Diseases of the lung itself do not offer the only obstacle to respiration; diseases of the neighboring organs or tissues often exert this influence to an alarming and even fatal extent. Under this head would come inflammation of the Pleura the lining membrane of the lungs, a serous "cul de sac" which completely envelopes them and which by its peculiar reflections and —

adaptations, furnishes a support, as well as a free, smooth and lubricated surface for the easy and healthful performance of it's office. Inflammation of the Pleura presents in it's Anatomical Characters nothing peculiar or different from those presented by serous membranes in general in this condition. In the first stage of the disease we find the Pleura wanting it's natural membranous and translucent character, but exhibiting at the seat of inflammation traces of an increased and excited state of the blood vessels, presenting several shades or varieties of Redness, either the diffused the punctuated or the arborescent, either in itself or in combination with the others sufficiently distinctive of this stage of the Inflammation. The disease if not terminated in this stage by death or the interference of art, merges into the second stage the Stage of Effusion. We know that the natural tendency of inflammation of serous membranes in general is to the effusion of Lymph; so in Inflammation of the Pleura if unchecked in the first stage we have

presented this natural and almost invariable product of a certain degree of excitement of the blood vessels: Viz: Effusion of Lymph. This (virtually a constituent of the blood) first floats about fluid or almost so in the cavity of the Pleura, but gradually fastens itself to the membrane, and becomes by the organization and establishment of vascular apparatus which it receives, a part and parcel of the membrane itself. This matter when first effused presents a whitish or yellowish appearance, the consistence of jelly, but when adherent and organized becomes darker in color, and more firm and dense in consistence. The amount of this deposition varies of course, according to the intensity and duration of the cause; and its locality (permanent or temporary) depends upon the seat of the Inflammation. In the course of time (if absorption occur) the two surfaces of the Pleura (the costal and Pulmonary) become aggluteinated together in the seat of the Inflammation, this occurs sooner or later according to circumstances the quantity of interposed Serum &c &c. Hence

in all autopsies if we discover this abnormal condition in the relation of the two surfaces of the Pleura to eachother we may pronounce with certainty the previous existence of Pleurites and (vice versa) if we are making an Autopsy of a person, who at any period of his life has had Pleurites, we may predict with no inconsiderable degree of confidence this adherent state of the Pleura Pulmonalis and Costalis. This condition of the membrane although it may in a slight degree offer an obstacle to the play of the lungs yet effectually prevents in its locality the occurrence and consequences of a similar inflammation The extent of surface in the state of inflammation determine the extent of the abrasion, sometimes but a small spot not larger in size than a dollar and then again the Pleura through its whole extent in one or even both lungs may be found presenting this abnormal condition. The natural secretion of Serous membranes we know to be known. This in a healthy condition is poured out in just sufficient quantities to lubricate and keep slightly moist the surfaces of the mem-

branes. But when arrived at a certain stage of inflammation, this natural product is increased so much in quantity as to prove by its presence an incumbrance often even a fatal one. It is specially so in the cavity of which we have just been speaking. The Inflammation if unchecked in a certain stage must go on to Effusion and in proportion to its quantity and the suddeness with which it is produced, is its presence merely annoying, critical or even fatal. In color it differs but little from the natural healthy serum of the blood, indeed it may not differ at all; but is generally straw-colored or darker than natural. Its quantity like that of the lymph depends upon the extent of the surface and the degree of inflammation; Sometimes the quantity effused is so small as scarcely to be appreciable, in other cases it amounts to a gallon or more generally inodorous. Observation has proved that Inflammation of Serous Membranes does not Generally or even frequently terminate in Suppuration; But this morbid product is sometimes found in grave cases of Pleuritis, when the Inflammation has

been suffered to go on unmodified by medical interference, and sometimes even in spite of all the appliances of art. This condition however is most frequently found in Traumatic Pleuritis where the cavity of the Pleura has been placed in communication with the external air by breach of the Pleura costalis, or when by ulceration of the lung a fistulous orifice has been produced causing a communication with the cavity of the Pleura and the Bronchial tubes. The Amount of this morbid product depends in a measure upon the causes which determine the quantity of the others of which we have just been speaking and also in Traumatic Pleuritis upon the extent of injury and the length of time in which the cavity of the Pleura is exposed to the presence of air. The pus thus produced often becomes decomposed and putrid exceedingly offensive in odor, and causing the production of fetid irritating gases, which by the effects the produce either separately or conjointly with others, bring us to the consideration of another condition. Viz. The State of the Lung. The condition

of the lung is natural and absolutely unmodified in its relation to the surrounding parts in the first stage of Inflammation. We know that the Chest in a healthy condition, is completely occupied by the Organs whose office it is that of the Chest to contain. The presence in the cavity of the Thorax of any foreign substance whether the product of disease or accident must (a priori) encroach upon the contained organs and produce mechanically a state which we call Compression. The presence of lymph serum, blood, pus or uniform matter, must according to their several or individual quantities exert this influence to a greater or less extent. Since we find the lung in this stage of the disease occupying very fractional space less than the natural standard according to the extent of the compressing cause The lung in the stage of Effusion may be found compressed to one fourth, one third one half or more or less of its natural size depending upon the causes just enumerated. The aforementioned conditions are the only

Anatomical alterations presented during the several stages of this disease, and the next step after their enumeration, would naturally lead us on to account for their causes. or the Causes of the disease. We find in this as well as in all acute inflammations of the organs contained in the Cavity of the Thorax, Cold acting as the most common exciting cause of the disease. Long continued exposure to a low degree of temperature, without sufficient protection to the surface of the body. Sudden vicissitudes in the thermometrical scale, or imprudent changes in the clothing of the patient, going in a state of perspiration, into a cold, chilly, apartment or open air sitting in a draught. wet feet, exposure to dampness generally, these separately or combined all operate as strong exciting causes of this inflammation. Others inherent in the constitution itself would act as Predisposing Causes. General debility, cachexia, period of convalescence from other diseases &c. In Traumatic Pleurisy, we have the disease brought on by external injury, acting on a constitution, more or

less, or even not all predisposed to the Idiopathic disease. In tuberculous patients we find this time after time in the course of Phthisis Pulmonalis occupying the vicinity of some tubercular mass which has lighted up this Inflammation in the Pleura. And again in perforation of the lung in the same disease, we have the unnatural presence of air, and the escape of pus into the cavity of the Pleura, acting as frequent and often fatal causes of this Inflammation. The enumeration of the causes of this disease, brings us in the next place to an account of its Symptoms. We shall divide these into two classes first the General or Constitutional symptoms secondly the local or Physical Signs. A patient after exposure to any of the causes just enumerated above, feels coming on him gradually a sensation of Chilliness creeping over the surface of his body, accompanied with aching pains in the back and limbs, loss of Appetite, general Malaise. This goes on to increase generally till the patient is at length taken with a rigor, sometimes of considerable

duration, and well marked at others but imperfect and of brief duration. The Chill is succeeded by a Fever of variable degrees of intensity sometimes sufficiently high to cause delirium with headache, restlessness and the general concomitants of high febrile excitement. Another common symptom of this disease is Pain generally acute, but in some cases just sufficiently severe to arrest the attention and cause a sensation of uneasiness. This is generally referred to the chest at the seat of the Inflammation and occupying a space varying in size- sometimes seated in a very small circumscribed spot and in other cases diffused over the whole chest The intensity of the pain, generally varies invariably with the extent of the locality, the more minute the seat, the more acute the sensation Sometimes this sensation is felt even in parts remote from the seat of Inflammation. Even as far as the loins and is mentioned by some author as being there even a more common sign of Pleuritic Inflammation than of Peritonitis. In some cases even in the most

acute stages of this disease no pain at all is felt. This pain is generally increased by pressure when it is seated in the Chest, made between the intercostal spaces over the seat of the diseased part. We find Cough to be another very common attendant upon this disease especially in it's first stage. This is sometimes quite annoying at other times intirely absent. The expectoration is small in amount of a thin glairy character. Another symptom very distressing to the patient and observers is Dyspnoea. this in the first stage of the disease is rather apparent than real, it is owing to the pain which the patient suffers at every inspiration, rendering him unwilling to breathe so far as he can control it on the affected side, and the consequent over action of the other lung which it has to undergo to make up for the deficient aeration of the blood in the other. This causes the hurried respiration which we observe so frequently in this disease, and the anxiety and distress depicted in the countinance of the patient, who instinctively in this stage chooses between two

evils, Pain and Dyspnœa. When the disease has advanced to the stage of Effusion we find in the compressed state of the lung a sufficient cause of dyspnœa and this symptom varies in degree according as the quantity of effused matter is great or small, slowly or suddenly induced. Where it is small in quantity the Dyspnœa is scarcely appreciable. But where it is large in amount and suddenly brought on, it causes the greatest suffering and distress. When it is presented gradually we find that the other lung has time to prepare itself for the double office it has to perform, and hence under this condition the quantity of the Effusion may be vast indeed so much so as to render one lung perfectly useless, yet we find the patient breathing without any great amount of difficulty. The decubitus of the patient is another symptom which will arrest the attention of the observer. In the acute stage of the disease the patient generally lies on the sound side, if but one Pleura be affected; if both he assumes either the supine or erect

posture. In the second stage of the disease, we find him lying on the diseased side, in order to relieve the opposite lung of pressure caused by the effused fluid. The Pulse in this inflammation, as well as in all acute inflammations of serous membranes is generally hard and tense and indicates great and active excitement of the heart and arteries. We have yet another class of elements in our diagnosis in this disease. Viz; The Physical Signs; to which the attention of any one acquainted with the pathological changes wrought in the course of this disease would be naturally directed. Any thing which modifies the texture of the lungs, or its natural relations to the surrounding parts, must produce a deviation from the natural standard, in the resonance of the Chest on Percussion. Greater or less according to the extent of the cause, and must likewise alter the character of the sounds heard in Auscultation of the healthy lung. In the first stage of this Inflammation we have no mechanical cause for any changes and hence

we find none very distinctly marked. We may have if the Inflammation be confined to one Pleura diminution of the Respiratory Murmur on that side and puerile respiration on the other, owing to the partial action one lung and the over action of the other. This symptom however is not constant even in single Pleurisies and must as a matter of course be wanting in the double form of the disease. This I say is the only change in the Auscultatory signs in the first stage of the disease before the period of Effusion. When this occurs we have others more or less distinctly marked according as the quantity of the effused matter is great or small. On applying the ear to the diseased side of the Chest in the first stage of Effusion before adhesion has taken place, we may hear the rough grating friction sound, produced by the attrition of the two roughened surfaces of the Pleura in the act of Respiration. This however may be absent entirely, or be inappreciable. Percussion in this stage would elicit no unnatural sound because the quantity of Lymph Effused is scarce-

by ever (if at all) sufficient to produce any change. But in the second stage of Effusion we have changes obvious and characteristic. We have in the first place a change in the configuration of the affected side, a fullness and convexity of the Intercostal Spaces, displacement sometimes of the Heart and Abdominal viscera, but this fullness is the most striking this is generally appreciable to the eye, but to be more sure recourse may be had to admeasurement and comparison of the two sides, making some small allowance for the natural fullness of the right side, found to exist in most persons. The lung in this stage is floating on the surface of the liquid, and the most depending parts of the Chest must "a priori" be the seat of effusion, and in these parts we must look for any changes in the sounds of the chest elicited by Percussion. Hence we find dullness absolute and flat and our assurance of this being the cause may be made doubly sure by causing the patient to assume different attitudes and thus vary the locality of the effusion and the consequent variation in the sounds. Hippocrates

in some of his writings it is said gives us a method of informing ourselves of this condition, that is by means of Succussion or agitating the chest of the patient suddenly while the ear is in direct contact with its surface. This will elicit a sound perfectly diagnostic, and is in character like that of any fluid agitated in a partially empty vessel. This rather rude and primitive method of shaking a diagnosis out of a patient is however seldom now resorted to, as there are other means equally efficacious and more agreeable to the feelings of the patient. Sometimes when we apply our ear to the chest of patients in this stage of the disease, we hear a sound which has been called "metallic tinkling" caused by the bursting of bubbles of air (most probably) rising up on the surface of the liquid. In this stage also we have with the disappearance of the Vesicular Murmur, the presence of another unnatural sound, when the patient coughs or talks, which is dependent upon the consolidation of the Lung by pressure and the presence, and the presence of a better conducting medium for the sound, which has been denominated by Laennec Egophony; a peculiar tremulous

sound resembling the bleating of a goat and doubtless depending upon the agitation of the Effused conducting fluid. This sound however can only be caught where the amount of effused fluid is slight, in the first stage or in the last stage where it has been reduced by absorption. The disease which we are most liable to confound with Pleuritis is Pneumonia and as a mistake of this kind is a matter of some importance, it may not be out of place here to state some of the points, which serve to distinguish the two diseases the one from the other. In the first place in Pleuritis the pain is generally acute; in Pneumonia, slight and dull in Pleuritis we have generally a hot and dry skin, with a hard pulse in Pneumonia a tendency to moisture of the surface, with a soft pulse. In Pneumonia we have rusty colored Sputa in Pleuritis none In Pneumonia we have the dullness on Percussion fixed and located during the whole course of the disease. In Pleuritis we can cause it to disappear by varying the attitude of the patient In Pneumonia in the first stage we have crepitation in Pleuritis this is absent. In Pneumonia we have

Bronchophony as well as in Pleuritis, but no Ægophony or Metallic tinkling. In Pneumonia we have no preternatural fullness of the Chest which we find to be the case in Pleuritis. Now that we have enumerated the means of diagnosing this disease we shall next proceed to consider the Treatment proper to be pursued in its different stages. Active diseases require active remedies. In this class Pleuritis stands in the foremost rank. All acute inflammations of serous tissues, characterized as they are by striking symptoms call for prompt and vigorous measures for their subjugation or conduct to a safe issue. Amongst these Bloodletting ranks first. In almost all cases of Pleuritis you not only do not do harm but you do a positive good by the abstraction of blood locally or generally. This is indicated not only to relieve the local Inflammation but also to give relief by lightening the burden required of the distressed and partially inoperative organ. In this disease, the first thing proper to be done in the first stage, unless there are strong contraindicating circumstances, is to bleed the patient from the arm, and not to bleed by

ounces or measurement, but bleed till you relieve the pain or Dyspnœa or make some sensible impression on the System. It is best generally to take a large quantity of blood at first, or you will very likely be called on to repeat the remedy, within a short time; it may indeed be necessary any how, but still this may be obviated very frequently by a full bleeding at first. In addition to this cups or leeches on the Chest, where the state of the pulse does not indicate Venesection. Hot fomentations to the Surface of the Chest, in conjunction with these other remedies are supposed to be productive of much good. Dr Bartlett recommends the common Onion Poultice. Mercury has been observed to exert a wonderfully controlling influence over those Inflammations, whose peculiar product is the exudation of coagulable lymph. Mercury must be exhibited, in some form or other in this disease and Calomel is perhaps the best It must be given in order to bring about some evidences of its constitutional influence. I.E. in small doses and at short intervals, say, two or three grains every three hours, in combination

with Opium or some of its preparations, to keep it from flowing off on the bowels. The Pulv. Effervescens. is perhaps the best, as besides fulfilling the above indication and likewise relieving pain, it also promotes a termination of the fluids to the surface and gentle Diaphoresis The patient should be kept in a comfortably warm apartment, and suffered to drink warm diluent fluids, and the regimen should be strictly anti-phlogistic. Purgation does not enter prominently into the treatment of this disease, but the bowels should be kept slightly [illegible], this condition may be insured by the administration of any mild laxative, when there is a tendency to constipation. Where the means above mentioned are adopted promptly at the onset of the attack the disease may be very often "regulated" at its very birth, but it generally either on account of the inefficiency, or in spite of the most appropriate treatment, runs on to the stage of Effusion. Here in addition to the Narcoticals (which if they have not manifested their constitutional influence should be continued) we should exhibit

diuretics in order to get rid of the Effused fluids. Ona of this class perhaps Squills and Digitalis are the best. These should be persevered in till the object for which they were prescribed is intirely accomplished. The repeated application of Blisters which in the period of active excitement generally do harm, in this stage will be found to be highly beneficial. In addition to these other remedial means, the patient might be allowed a drink of Bi Tart. Potass, in order to assist in draining off the Effused fluids. When all these means have failed to relieve the patient and the Effusion is going on to increase, despite all our remedies, it then becomes a question whether the operation of Paracentesis Thoracis, should be performed. This should only be adopted as a last resort, when all other means have failed, and there is danger of death to the patient from immediate suffocation. It should not be practiced merely to give temporary relief, but to guard against immediate death. It is a hazardous operation which should not be determined on, till after mature deliberation, and a conviction of its

absolute necessity. The opening should be made in some depending part of the Chest, with a Trochar or lancet carefully introduced. The fluid may then be drawn off by a Syphon. If the fluid proves to be Serum, Dr Watson recommends to draw off, as much as you can get, and then to close the wound; then if hectic symptoms supervene, to reopen it. If on the contrary the fluid proves to be Pus, then he says keep the wound open, and if there is much accumulation, draw off the matter twice a day in the manner first recommended. There is a difference of opinion among Physicians with regard to the quantity to be drawn off at a time. However the circumstances of each case, will guide the practitioner in the adoption or rejection of this rule of Dr W—. This operation though it gives the patient a chance for his life, is generally attended with fatal consequences. But this should not prevent its' adoption, when the patient is in the State previously described. The patients system under these circumstances, should be sustained with tonics and stimuli if necessary, and a

nutritious diet, in order to enable him, to bear up under the Hectic Symptoms, which so generally manifest themselves after this operation.

Prognosis. The prognosis in this disease is generally favorable; a very small proportion of those who are attacked, being destroyed by it. The mode of death is generally by Apnœa or debility. Our prognosis would of course be modified by different circumstances; by the age of the patient; the general constitution, the habits and mode of life &c &c. Being more likely to prove fatal in Old persons than in young, in the weak and debilitated, than in the vigorous and healthy, in the intemperate and imprudent, than in persons of temperate steady habits. We might say a good deal more in relation to the subdivisions of Pleuritis the Latent and Chronic; but feel conscious that we shall receive a ready excuse for our omission from those who have been indulgent enough to read even thus far.—

Finis

An Inaugural Dissertation

On

Acute Pneumonia

Respectfully Submitted

To The

Examination of The

Provost, Regents, and Faculty of Physic

Of The University of Maryland

For The Degree of

Doctor of Medicine

By

Edward L. Carter of Elkton Maryland

March 1845.

An Essay on

Acute Pneumonia

In selecting this as the subject of my Thesis is not that I am better acquainted with its history than perhaps some of the diseases now do I consider it necessary for me to enter into a detail relative to its speculative History, I will therefore confine my remarks to the different stages and morbid anatomy as it is believed to exist at the present time, There are three well marked and very constant conditions of the lung corresponding to the different degrees and periods of its inflamation. The first Stage is that of Engorgement. The substance of the lung is gorged with blood or bloody serum it is of a dark red colour externally and crepitates less under pressure than Sound lung does there is more liquid than air in its cells, it is heavier also than Sound lung it is inelastic and retains in some degree the impression of the finger. When the engorged portion is cut there is a reddish and frothy Serum flows from it. its cohesion is diminished and

is more easily torn. The mucous membrane of the bronchial ramifications are of a deep red colour and will almost always float in water. Most generally there is some degree of mechanical engorgement of the back part of the lungs and it is very difficult to distinguish them from each other. But should it be not in a depending part of the lungs it may be considered pathognomice of the existence of inflamation. But if the inflamation should continue a further change presents itself. It is still red externally and within but the crepitation will cease under pressure, it contains no air and will sink in water and when cut will presents a liver like substance. to this condition of the lung has been given the term of Hepatization. This condition of the lung is denser and more solid than before and also more friable and more easily broken this is said to be the effects of softening of the cellular tissue which binds its component parts together. If the whole lung be involved in this degree of inflamation it will not collapse when the chest is cut into and is swelled as other inflamed parts are by the congestion of its vessels and by the effusion of blood or by some of its constituents parts into its interstices. In this condition the lung is

Sometimes so soft that a moderate degree of pressure will reduce it to a state of pulp. To this stage or state of the lung Andral has given the name of Red Softening or Ramolissement Rouge. The next stage or that degree of the lung further advanced has been given the term of Purulent Infiltration. This presents a red, drab, straw or stone colour, of a grayish hue and sometimes ~~presents~~ presents a mottled appearance. The lung is still more rotten than before. It is full of puriform matter which may be made to exude by gentle pressure, by forcing the finger into it a small cavity may be made which will soon fill with pus and which might be taken for a recently formed abscess. It appears from the researches of modern times that inflamation of the lungs going on to suppuration does not lead to the formation of circumscribed abscess as it does when it effects the cellular tissue or parenchymatous structure of other parts of the body. Abscess of the lung was at one time considered a very common thing but more recent investigation has decided that it is of very rare occurrence. Laenec from several hundred dissections of persons dead of pneumonia he only met with but five or six with pus in the inflamed

lung, and but one of abscess. The next stage or degree to be considered is that of Gangrene which I believe is almost as rare as the formation of abscess, but it does occasionally occur as the result of acute inflamation of the pulmonary substance. It is somewhat more common as a primative and independent affection. Sometimes it occupys a large portion of the lung and at other times it is more limited the colour of the part thus affected under inflamation is dark of a dirty olive or greenish colour. The gangrenous portion is moist and wet and described by Dr. Watson using his own words stinks most abominably he says this horrible odour is in truth during life the most distinctive character of Gangrene of the lung, and sometimes renders the room scarcely endurable. Inflamation may effect both organs at the same time or it may effect one of them alone or it may be confined or it may be confined to a part of one lung or in other words it may be partial or general. In respect to its location it is much more common on the right side than on the left. Of one hundred and fifty cases reported by Andral ninety were of the right lung alone, and it is said to exist much more frequently in the lower and

posterior part. Inflamation of the bronchi almost always accompanys inflamation of the parenchyma The mucus membrane presents a red colour and when a single lobe is affected Dr. Watson says that the redness of the mucus membrane existed in those bronchial tubes alone which are distributed to that lobe Now such being the changes which the lungs undergo during inflamation the next thing to be considered is the existence of this inflamation and in so doing we must have recourse to the Physical Signs. If the ear be applied to the chest during the first stage or that of engorgement you will hear crepitation which in the commencement is limited to one spot is considered by some writers as a direct sign having immediate reference to the structure of the part. I should also say that there is a kind of resetting respiration which precedes this crepitation and the natural respiratory murmur is diminished and loses its natural softness and fulness. This crepitation previously spoken of when it does exist is considered by writers to be pathognomic of the first stage of inflamation, but it is not present in all cases for where the inflamation is seated near the centre of the organ the engorged vessels cannot dilate and this ronchi is produced

by the expansion of the diseased vesicles and of course it cannot be heard. But when the seat of the inflamation is near the surface it always occurs. There is also dulness on percussion which I believe is caused by the secreted fluid partially displacing the air in the tubes. The next signs to be considered are those of the second stage which are considered more pathognomic of the disease the tissue of the lung is said to be completely altered and this alteration is attended with corresponding physical Signs. On percussion we find complete flatness and on applying the ear to the cheast we have a bronchial respiration. which is said by Dr. Gerhard to be more marked in pneumonia (in this second stage) than in any other affection of the lungs it is more distinctly heard where the tubes are of the greatest calibre. broncophony is also heard and nearly always coexists with the bronchial respiration this is believed to arise from a portion of the lung remaining in the first stage of inflamation. These signs are present in all cases except where the patient breathes so feebly so impel the air through the tubes these signs are so generally met with that they are described as being pathognomic of this second stage of pneumonia. should the patient be directed to cough we will find that the bronchial respiration is much more distinct. the air is driven into the smaller tubes

during the inspiration and a crepitus is produced is produced either in the same spot as the bronchial respiration or near it for the lung for the lung can never be completely solidified. These morbid sounds are most plainly marked when the number and size of the bronchial tubes involved in the hepitization are the greater. They are most distinct therefore when the inflamation occupies the upper part of the lung but when the lower lobe alone are inflamed they may not be heard at all, and should the hepitization be complete as to prevent the chest on the affected side to expand the bronchial respiration will be absent. Now with all this you will generally hear in the sound lung if the whole of the other be engaged in the inflamation you will hear puerile respiration, and this is a strong symptom that a part of the lung is spoiled and the remaining part is endeavouring to compensate for its deficiency. The next stage to be considered is the third or that of Purulent Infiltration in which percussion gives as in the former stage dulness, as the lung remains solid and but little air contained in their tubes, the sounds excited by auscultation are obscure as the air has been drawn from the diseased lung and therefore little or no sound is heard. The respiration

when heard is very feeble a mucus ronchus is also heard we then have as signs of the third stage. flatness on percussion feeble bronchial respiration and muchus ronchus. The fourth stage is that of abscess are the usual signs of a cavity in the lungs the dulness continues. with that we have cavernous respiration. several of these stages may exist in the same lung and the signs of each may be heard without and the proportionate extent ascertained with tolerable precision If the disease should terminate in recovery it gradually retraces its steps until it returns to a healthy state their regularity of course depends upon the stage which the disease had previously reached. when first the crepitation return is heard it is loosen or more moist than ~~the~~ true crepitant. this gradually subsides and the vesicular murmur reappears but remains for a long time very feeble to what it was previous to the attack. the bronchial respiration and dulness does not suddenly cease but will remain in some degree for some considerable time after the cessation of most of the symptoms of the disease. when however the disease reaches the third stage. this series of changes does not occur. the mucus ronchus is the

first signs observed. The expirtant ronchus of return is not heard as no air passes through the smaller tubes, the fluid consists of mucous and purulent matter, resulting from the breaking down of the diseased tissue and the secretion and the secretion from the tubes passing through the inflamed mass which contributes very much to the relief of the disease. This secretion gradually assumes more and more of a mucous character until it becomes perfectly natural The return of the fourth stage is marked by the secretion of pus becoming less and less and finally disappearing with the cicatrization of the parts involved in the abscess while the secretion becomes entirely mucous in its character. These are the different signs belonging to pneumonia. They are however liable to some modification by some circumstances which are necessarily attendant upon the disease There are always some lesions found in pneumonia, these are inflamation of the pleura and of the bronchial mucous membrane, when the pleurisy is slight the affection is simply called pneumonia, but when the pleurisy is severe and attended with effusion it is called pleuro pneumonia and when the pleurisy is considerable with but little inflamation of the parenchyma of the lung it is termed pleurisy. The bronchitis which accompanys this disease

may be confined to the tubes which lead to the lobules or it may extend to the whole bronchial ramification.

General Symptoms. In the majority of cases the disease is ushered in by chill or rigor by more or less febrile reaction with increased action of the pulse and soon after a pain or stich in the side is felt with cough and a sense of oppression in the chest. Sometimes it steals on more insidiously and succeeds to bronchitis, the inflamation appearing to propagate itself by little and little from the larger to the smaller bronchi and finally to reach the air vesicles themselves and this may be ~~with~~ without the pain or stich in the side at first the cough is dry but it is very soon attended with a very characteristic sort of expectoration the dispnea is sometimes slight in the outset at other times very great. The pain in this disease exists only in those cases where it is accompanied by some degree of pleurisy it is generally felt a little below the nipple but it may exist in any part of the chest it is aggravated by cough by a free inspiration by sudden changes of posture by pressure made upon the intercostal spaces or by percussion of that part and for the same reason the patient cannot lie on the painful side, and

the patient almost always lies upon his back. It appears that inflamation of the upper lobe causes greater difficulty of breathing than the lower. Delirium Dr. Watson says is a symptom which very often occurs; it denotes that the due arterialization of the blood is interrupted by the pulmonary affection.

The expectoration of pneumonia consists of Rust-Colored Sputa uniting in the vessel containing it so as to remain in the vessel when it is turned bottom upwards and shaken. but at the same time pneumonia may exist without this, but where this does exist it is one of the most certain indications of its presence. The blood and mucus are ~~are~~ mingled together and in proportion to the quantity of blood the sputa becomes of a yellow colour or that of rust. As long as this mass flows readily along the sides of the vessel we have reason to hope that the inflamation does not pass its first degree. But when this sputa acquires this viscidity so as no longer to separate itself from the vessel when it is inverted, when this occurs we have reason to fear that the disease has reached its second stage or degree. When the sputa becomes thus rusty and very viscid the chest will yield a dull sound and the vesicular murmur is destroyed and bronchial respiration

takes its place. The disease is then said to be at its acme and the expectoration remains for sometime stationary, and if the inflamation should recede the sputa becomes again less tenacious and will gradually assume the appearance of a common catarrh, but if it goes on the rust coloured sputa will continue to the end, often there is less expectoration so none at all. Not that the mucus ceases to be secreted but that its exceretion is no longer possible either on account of its extreme tenacity or on account of the patients debility It will then accumulate in the bronchi trachea & larynx in succession, they fill up the air passages and suffocate the patient: sometimes the expectoration in the advanced stage of the disease consists of a fluid having the appearance of plumb juice, Andral says this has led him to announce this as the existence of the third stage of pneumonia, and that upon examination after death has seldom failed to justify his diagnosis. When the inflamation passes in to gangrene the expectoration becomes of a greenish or redish or dirty gray colour, and exhales a fetid odour resembling gangrene of the external parts. Prognosis. The prognosis is very variable it often depends upon circumstances unconnected with the

disease itself, in simple pneumonia is favourable when other things are not unfavourable, that is where it attacks persons of previously good health and the treatment is commenced early but when it is complicated with an affection of the liver and brain the prognosis is more unfavourable. Duration. A mild case of pneumonia lasts generally from two to twenty days if it has continued a few days before the commencement of the treatment it rarely ends before the tenth day. but if you should be fortunate enough to be called to the patient in the very onset of the disease you may shorten somewhat its duration When it terminates fatally, death usually occurs in the third stage. this stage is sometimes reached in three or four days. but generally about the second week. Treatment. The great remedies to be employed in the treatment of pneumonia are bloodletting tartarized Antimony and Mercury of these bloodletting is the chief, in the first place it tends to extinguish the inflamation and again it has the effect of relieving the particular function of the lungs. Dr. Gregory of Edinburgh said that if he was called early to a case of pneumonia he would be contented to dispense with all other aids but those of the lancet and water gruel The abstraction of blood will be effectual in proportion as

it is early during the first stage, the patient should be bled in an upright posture from a large orifice, and in a full stream and it should be continued intil some sensible impression is made upon the system, until the pulse becomes softer or if it be contracted until it becomes fuller until the sensation of construction is abated and the dispnea relieved or until syncope is at hand. bleeding in this early stage often affords immediate relief both to the dispnea and pain, sometimes the pain does not cease at once but goes off a few hours afterwards but if the breathing be not at all relieved at first the case generally does ill, we are not however to expect that one blood letting will be sufficient even if it be in the first stage of the disease at this same time it may happen but not often. The patient if possible should be seen within four or five hours after the first venesection, that it may be repeated if necessary. many fatal cases says (Dr. Watson) have been fatal from want of this attention from too long an interval having elapsed between the bleedings, it may be necessary to open a vein three or four times in twenty four hours, and the ultimate loss of strength will be much less than if they had been performed at longer intervals blood should also be taken from the surface of the

chest by means of cups or leeches as an auxiliary to the lancet which will be more indicated if there be much pain. Antiphlogistic regimen should also be observed throughout the whole course of the disease the patient must be kept to his bed and that all unnecessary exertions of his lungs should be forbidden. When the inflamation has advanced to the second stage the removal of blood will not have so decided an influence upon the inflamed and solid parts but even then if duly moderated will have a very good effect. it will diminish the action of the heart and arteries and tend to prevent the extension of the inflamatory process. it will diminish the quantity of blood circulating through these portions of the lungs which are still pervious and relieve the dispnea and will favour the reabsorption of lymph by which the air tubes of the effected parts have been blocked up. But the time arives when bleeding instead of being useful is positively injurious, reducing the patients strength and incapacitating him from bringing up and ridding his lungs of the tenacious mucus exhaled by the bronchial membranes. Some other remedy therefore is necessary to assist the lancet or to employ alone when the lancet can do no more good. and we have two such

in mercury and tartarized Antimony. The tartar emetic agreeable to Dr. Watson appears to be the best adapted to the first degree of the inflamation (that of engorgement) and the mercury to the second (or that of Hepitization), should the administration of these remedies occasion sickness and purging it may be checked by adding a few drops of laudanum to each dose the tart Antimony should be commenced with about 1/3 of a grain increased perhaps to two grains every hour to two as may be considered best. It may at first occasion vomiting but by continueing it will at length be borne without any further vomiting After the inflamation has reached the second stage, mercury is considered more worthy of confidence than Tart Antimony it should be given to the extent of producing slight ptyalism and this should be done as speedily as possible, small doses repeated at short intervals, a grain every hour, two grains every two hours or three grains every three hours combined with Opium to prevent its running off by the bowels, should the bowels be rendered irritable by the ~~mercury~~ calomel Blue mass or Hydrocyanate may be substituted for it with advantage. and if the internal use of mercury should be contra indicated or if it is slow in producing its specific effect, the unguent Hydrargyri

may be rubbed in externally. If the pulse continue steady and firm wait patiently the effect of the mercury. But when sunken features a pallid face coldness of the surface and extremities a tendency to delirium and a feble or irregular pulse proclaim that the vital powers are giving way and it will be necessary to administer stimulant medicines. such as carbonate of ammonia and Wine whey and feed the patient on Milk or Beef tea

Blisters are sometimes applied to the chest but I believe it is not considered good practice to employ them in the early stages. for the reason that they occasion considerable distress to the patient and tend to aggravate the existing inflamation But when the fever has somewhat subsided and the heat of the skin diminished. and the expectoration difficult. the dispnoea considerable. a sense of pain or constriction in the chest. then a blister is often productive of some benefit. Purgatives are considered of less value in pneumonia. than in many other inflamatory affections. but it is deemed highly proper to give an active aperient in the onset and have a discharge from the bowels at least once a day

Finis.

An
Inaugural Dissertation
on
Intermittent Fever
Submitted to the Examination
of the
Provost Regents and Faculty of Physic
of the
University of Maryland
for the Degree
of M.D.
by
Frank Rogers

Annapolis
February 12th 1845

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Respectfully submitted to the criticism of the Provost, Regents & Faculty of Physic of the University of Maryland. by

Frank Rogers.

Intermittent Fever

Of all the diseases with which the healing art has to contend there is none which reigns over a more extensive geographical field than does Intermittent Fever. Consumption herself has not a greater range in which to work her devastations, and though more tyrannising and oppressive to her captives when once they fall within her unrelenting grasp does not make so many. Though the exact seat and nature of Intermittent fever is not known, there is no malady to which man is exposed that yields more quickly, or affords a more authentic and unquestionable proof of the power of medicine. The causes of Intermittent fever heretofore believed to be malaria produced by vegetable decomposition affected by a sufficient degree of heat and moisture is now questioned, it having been pretty satisfactorily proven that though vegetable effluvium is almost

invariably associated with that peculiar poison
malaria, it has none of its peculiar proper
this malaria being generated in sandy distri
of country totally destitute of vegetable ma
& moisture, and that it is not generated in s
marshes alike replete with both, and surroun
by an atmosphere of sufficient temperature

Though malaria is thought to be the alm
invariable cause of Intermittent it is general
admitted to be produced also by irritation suc
as intestinal irritation; irritation produced by
spiculae of bone and other foreign matter wo
through the cellular tissue, I should think
however that these should be considered rat
as exciting agents than real causes.

A paroxysm of Intermittent is gener
made up of three different stages, well def
and following each other in regular succes
sometimes however this natural order of th
is reversed and we have anomalies as in ot
diseases. A paroxysm of Intermittent genera
commences with the cold or first stage, follo
by the hot or second stage, which is succee
by the sweating or last stage, which term
in apyrexia and an almost perfect state
health. The symptoms which accompany a
precede the cold stage of an attack of

Intermittent, are those which show an involvement of the nervous system accompanied by atony of the heart & blood vessels: those of the nervous system which precede the chill, are weariness, lassitude, stretching, gaping, general malaise, head-ache, pains in back and limbs with deep-seated pain in the joints, nausea and vomiting, though these latter are most frequently attendants on the hot or second stage than on the cold; these going on to increase the patient feels a coldness, as if a current of cold air was passed over him, these sensations are felt especially down the back.

Those symptoms which indicate atony of the heart and blood vessels, are cold extremities & nose, paleness of the surface, blanched or livid lips the coldness down the back increasing and becoming a more general contracted visage, features sharp, countenance exhibiting an anxious, distressed and shrunken appearance, and the whole body being shrunken & lessened in appearance and circumference: the skin is dry and harsh presenting that peculiar condition called goose flesh, the skin having shrunken everywhere but immediately around the

roots of the hair; shivering of the whole body now takes place beginning and having its acm in the lower jaw. The pulse during this st of the paroxysm is small, intermittent, irreg & threadlike, quick and frequent. After the c stage "which usually lasts from twenty minut to two hours", has reached its acme it gradu begins to decline, reaction as gradually comes the pulse which was scarcely perceptible b now quite manifest, the lips lose their livid and by degrees assume a more healthy hue the whole surface undergoes a change from the pale bloodless & shrunken appearance that of a more natural aspect, the eyes wh were dull & glassy during the cold stage b become bright, sparkling and suffused with tears, the patients thoughts pass through h mind in quick succession though he is no able to concentrate them on any one point

Nausea and vomiting often occur during the decline of the cold stage, and sometimes through the hot, and sometimes even throug the sweating stage, though this is a rare occurrence; the extremities now exhibit a perceptible increase of temperature though they are the last to exhibit signs of reac

"The cold stage does not always terminate in "reaction but the unfavourable symptoms go on "to increase in severity until they terminate in "death from coma". As the hot stage progresses the pulse becomes full, regular and strong the skin continues dry & rough and head ache increases in intensity, the patient now complains of thirst, but his stomach is often in such an irritable state that it will retain nothing and ejects the liquid almost as soon as it is swallowed: his sensibilities are increased to a painful degree during this stage of the paroxysm, the light causes the greatest pain so that he is not able to expose his eyes to its influence; the least noise is excruciating and he feels as if his head was pierced when ever any one speaks; the breathing however is more free than it was during the cold stage and the stricture and oppression about the præcordia is generally modified in proportion as the hot stage advances, delirium also is a common occurrence during this period of the paroxysm; Convulsions likewise are not rare concomitants during this period of the paroxysm, among children especially they do not always affect the whole body

sometimes only half of the body is convulsed and sometimes only one limb, cutaneous eruptions also occasionally presents themselves. some of which terminate in a few days in an effusion of lymph under the epidermis. seperating it from the Rete Mucosum, a case of which I saw lately

A man of twenty eight years of age, robust and hearty; considerably disposed to be corpulent complaines of feeling unwell for some days previous to an attack of Intermittent fever of the tertian type, during the hot stage of the first paroxysm, a general and dense efflorescence developed itself over the entire surface of the body, which underwent no change in the sweating stage or time of apyrexia; during the first twenty four hours the redness could be dispersed by pressure made with the fingers but returned immediately on its removal the next day when I saw him pressure produced no effect on it. this was the last time I saw him. but it was subsequently shown a glove of epidermis extending from midway the metacarpel bones to the roots of the nails the skin from the whole body had peeled off in the same way. After the fever has continued from two to ten hours the delirium generally declines, the pulse is moderated the breath

more free, and as the fever declines the thirst becomes less intense. The sweating stage now comes on as the hot declines, first showing itself on the neck, head & chest in a gentle perspiration gradually increasing in extent and profuseness until the whole body is bathed in a profuse perspiration, and there is a copious deposite of sedimentous urine together with an increase of the other secretions, which are suspended during the hot & cold stages; as the sweating stage advances the pulse improves though still quick, frequent, full and resisting, the pain in the head often remains though much diminished in intensity, Convulsions and delirium are occasionally present during this stage, but wear off as it progresses.

Intermittent fever is generally divided into three Kinds, Mild, Bilious & Congestive; the first is the most simple, least dangerous and most common, leaving the patient, as soon as the paroxysm is over in a state of apyrexia and apparently perfect health, all the functions in good order until another paroxysm supervene the mildest or first class is generally of the tertian type which occurs during the middle of the day giving but little premonitory malaise so common to the other Kinds

previous to the paroxysm: the different stages of this class are well marked and of short duration, the whole paroxysm not lo more than two or three hours.

The bilious or second class is that fo of the disease in which the biliary organs principally implicated characterised by purg or constipation, nausea and vomiting of bil matter through the different stages of the p ysm, headache not only during the paroxy but also during apyrexia which is usuall very short and imperfect; pains in the bac limbs are often severe, the cold stage is b slight in comparison with the hot stage is well developed and of long duration, the is dry excessively hot and harsh, the pul is quick, frequent, tense and resisting th bowels are loose or constipated with supp of all the secretions, the tongue furred dry, and the eyes presenting a jaundice appearance. The sweating stage in this is often very imperfect, a slight perspira only showing itself on the forehead, the r of the surface remaining perfectly dry only becoming softened, the type of this is generally the tertian order. The Congest form of Intermittent fever is the most rare as well as the most fatal of the

of the three classes, generally puts on the tertian or double tertian type, and occurs most generally in Autumn. In this class the cold stage greatly predominates over those of the hot & sweating which sometimes do not take place, death supervening during the cold stage, but though the cold stage predominates over those of the hot and sweating in points of duration, it does not produce near as painful a sensation of cold as in those of the mild & Bilious forms. Persons attacked with the congestive form of Intermittent often complain of much weakness & malaise sometime previous to the cold stage which gradually increases to its full developement, the pulse is slower, more oppressed, laboring, weak and less frequent even than it is in the healthy state, sighing, oppression, anxiety & restlessness are depicted in the countenance and movements of the sufferer, reaction which is often imperfect makes its appearance in the most gradual manner, and the pulse ~~which~~ exhibits still that oppression & laboring, characteristic of the cold stage, the cold stage is seldom well defined.

But Intermittent is not always simple and uncomplicated in its form but is often associated with other diseases

rendering it often difficult, and sometimes impossible to diagnose it; such as hectic occurring at regular periods and terminating in a profuse perspiration; gives intermittent an opportunity to occur at the same time without its being readily detected, or should it occur during any fever there would be difficulty in distinguishing it if it was not well defined; then again a convulsion may occur in place of the cold stage, or the hot stage may come on periodically without the cold stage or periodic head-ache all of which anomalies yield readily to the remedial measures employed in Intermittents as it presents itself in its more usual forms. Intermittents of whatever form natural or anomalous, generally inflicts on the sufferer some organic lesion of the abdominal viscera.- Hypertrophy of the liver and spleen with induration, if the paroxysms recur often being the most common.

The treatment is generally divided into that necessary during the cold & hot stages and that during the intermission. In no disease has there been a greater quantity of medicines eulogised and recommended for their curative powers than in Intermittent fever; The Animal, vegetable and mineral Kingdoms have furnished innumerable remedies; but

researches comparitively recent have furnished us with that now well known medicine Quinine, an absolute specific "if there is such a thing" to the exclusion nearly of, all other substances, The treatment most generally practised is to give, after the operation of a purge, quinine gr ii every hour or two according to circumstances beginning five or six hours before the expected paroxysm, but if it should be near at hand the doses should be repeated, after shorter intervals and in greater quantity. Opium alone in large doses is often used with the happiest effect, in preventing a paroxysm, and when combined with quinine is a powerful adjuvant, As an external application opium is also used with success in the form of Laudanum applied by friction to the spine; Sinapisms to the praecordial region and extremities with hot applications to the latter, are also efficient adjuvants. Boneset, Lemon & bark of the dogwood & tulip tree, the sulphates of Zinc and copper & arsenic in the form of Fowlers solution are sometimes used but they are so much inferior to Quinine that they are only used among the poor or when the latter cannot be obtained. The usual means employed during the cold stage are the application of a moderate degree of heat externally

and the exhibition of warm drinks, and wh
the symptoms and pain are severe Sinapism
and stimulating frictions to the body with c
applications to the head if there is much h
ache; during the hot stage venesection
sometimes called for though it is seldom
we cannot give relief by the free use of i
and if the pain in the head or delirium
excessive they may be greatly palliated
the application of cloths wet with ice wa
and applied to the head.

An

Inaugural Dissertation

on

The Climate of the United States,

as an Endemic cause of disease.

Submitted to the Examination

of the

Provost, Regents & Faculty of Physic

of the

University of Maryland

for the degree of

Doctor of Medicine.

by

Washington Chew Van Bibber,

of Carroll County Md.

February 1st 1845.

Dedicated with much respect, to Prof N R Smith, as a testimonial of the admiration entertained for his Learning & Character by his

Friend & pupil.

W Chew VanBibber.

Preface

In extenuation of the triteness of the following pages I deem it but justice to myself to say that, when the Subject was chosen I hoped to be able to study & treat it, as it well deserved. But the great proportion of time consumed by the lectures, (the interest which they excited making me unwilling to neglect them): the great need I felt for preparation in the more practical parts of the profession: and the vast comprehensiveness of the Subject: soon proved to me that this hope was vain. I claim no originality: most of the ideas can be found in Dr Forry's work on "the Climate of the United States": "Sir J Clarke on Climate": "Dr Dunglison's Elements of Hygiene": and the treatise on Endemic diseases in the Cyclopædia of practical Medicine, by Dr. J Hancock.

The Climate of the United States as an Endemic Cause of Disease.

The term Climate which in ordinary parlance is used, merely to express the temperature of a region, possesses, in Medical Science, a wider Signification. It has an inseperable relation to the physical characters of a country; for it is influenced by a variety of natural phenomena and geographical localities. In Short we may say with Cabanais, that Climate is "L'ensemble de toutes les circonstances naturelles et physiques, au milieu desquelles nous vivons dans chaque lieu".

Endemic influences being recognised rather by their Effects, than demonstrative properties are, in all

their bearings a subject of vast pro-
lixity; for in enumerating them
fully, one would have to consider the
moral condition of the inhabitants,
as well as the physical phenomina
with which they are surrounded.
But leaving the former to the Hygie-
nist, we will in the first place,
point out a few of the latter which,
by the modifications they produce in
our climate, are supposed to influ-
ence the diseases of certain localities.
Extreme ranges of the thermometer
during the different seasons; the
serenity or humidity of the atmosphere;
changes of electric tension; The
geological formation, or soil: and
the presence of terrestial emanations
dissolved in moisture. The in-
fluence which geographical lo-

calities have upon these, will be mentioned when speaking of them seperately.

Now, were facts sufficiently numerous and precise for scientific generalization, it would be alike an interesting, and profitable study to trace the various peculiarities of Endemic diseases, with the physical Causes alone which influence the human organization. But in attempting this we are invariably entangled amidst the Labyrinth of Endemial influences, that are, at first sight, presented to our view. The one mysterious agent — malaria — which is too well recognized by its noxious effects upon the human System, though hitherto remaining wholly inscrutable in its nature; is a means of marking

the diseases of Each and every Locality, within definite boundaries with distinct peculiarities: dividing whole countries, as it were, into morbid fields, the fruits or harvests of which are as distinct & multifarious as the various products of the Earth.

On the 7th of Dec 1844. Dr. Bartlett exhibited to the medical class, the liver, Spleen, & kidneys of a man who had died at the Balt. Co Almshouse. He had come from a malarious district, and as these organs Showed every pathological evidence of remittent fever-; "it is, (said Dr B) an exceedingly curious fact that the man never had this disease. He died of Pneumonia." But from living in a malarious district, his System, or at any rate,

we know that, these organs of his body, were gradually changed by the poison. We know also, that the effects of this agent, in this case, are only experienced within certain known boundaries. It is true, that this malaria, constitutes one of the most prominent characters of the climate, within these limits. And this is the case throughout our own (and every other) country, that every portion of it, of a greater- or less extent, has its own endemic poison; a specific malaria- producing a specific & peculiar- disease. It is the duty, of course, of every practitioner in each malarious district, to make <u>that</u> his careful study. But it is not our object (for it would be an endless task)

to treat of these endemial influences separately. There is too little precision even in the little knowledge we possess upon these points. In the first place, we know not what constitute the real Elements of Climate, and those noxious agents acting upon the living organs, are still more inscrutable & complex in their functions.

But there are diseases which are influenced by the more general features of Climate: diseases found in all, but which we wish to prove, are more common in one System of Climate than another.

It will be necessary in the first place, to describe briefly the Systems of Climate found within the boundaries of the United States.

Dr. Forry in his late excellent work upon the climate of the United States has made three general divisions of its climate, viz, into the Northern, Middle & Southern divisions. And by means of thermometrical data registered by many eminent medical gentlemen, & particularly those of the army bureau, he has been enabled to draw isothermal, isotheral, and isocheimal curves through the United States: thus obtaining a meteorological chart (after the plan of Baron von Humboldt), exhibiting, a complete view of the climatic features of the country. The isothermal line (or that drawn through places having an equal annual temperature) like all the rest, is exceedingly irregular in its passage from east to west. The

Same ~~annual~~ annual temperature being found four degrees further north, upon the Pacific than upon the Atlantic Coast. We find the same annual temperature also to exist at the two places Keywest. and Ft. Gibson altho. they are separated by more than 10° of Latitude.

In the isotheral lines (marking equal summer temperatures) and the isocheimal lines (marking equal winter temperatures) we also find great elevations & depressions. For instance, we find the same average summer temperature at Portsmouth N.H. and Ft Vancouver. altho. there is more than a degree's differance of latitude. And we find the same equal winter temperature to exist at Balto. & Ft Vancouver. notwistanding they are separated by more than seven degrees of latitude.

But the differance between the extreames ranges of the thermometer, in different degrees of Latitude, are found to be far more interesting and Surprising. Take for example Keybest, (Latitude 25° N., and Ft Snelling (Lat 45° N.). The average minimum of the thermometer at the former is in January, when it is 57° above Zero. whilst at the Latter, in the Same month, it is 22° below Zero. Yet Strange to Say we find the mean maximum temperature of July, to be 5° higher at Ft Snelling, than it is at Keybest, in the Same month.
These results will be sufficient to Show, that a classification of Climates Cannot be made from Latitude alone: but that it must be based upon ~~the~~ Meteorological Phenomina, arising from Physical Geography. (Is it

not practicable then to Establish a System of Medical Geography, a desideratum in our profession?)

These facts are only adduced here to give some idea of the climatic peculiarities that really exist within our boundaries: and the last mentioned, viz the extreme ranges of the thermometer in certain localities, is the first Endemic influence to which I wish to allude. Dr. Forry in Speaking of it Says." The ratio of Catarrhal affections, pleuritis pneumonia, Chronic bronchitis increase & decrease in proportion as the Seasons are contracted. thus maintaining a direct relation with the Extreme range of the thermometer as connected with the Seasons: or in other words, it would appear to be a law that in proportion as the high

temperature of Summer makes an impression on the System, so the lungs become susceptible, so far as Phlogistic diseases are concerned, to the morbific agency of the opposite Seasons". And we have good Statistical tables, taken both in this Country & in England, to prove this fact; which renders unnecessary any of the Strengthening arguments which could be adduced on this subject from the known increase in the natural Stimulus of the Lungs - oxygen - in cold latitudes.

Tubercular Phthisis, it will be seen, is not included in the above enumeration. This is not found to be at all dependant on atmospheric laws: truly being, as said by Channel, the Epidemic of the Universe.

The injurious Effects produced upon
by the extremes of temperature,
the lungs, in particular, Suggested to
physicians long ago the advantages
to be derived from a change of residence
for invalids to Climates where
"The circling Seasons rule the year
Not mix in every monstrous Day."
The knowledge of this fact has, more
than once, since studying Medicine, sug-
gested to my mind, the propriety of the
common custom of sending children
from our most Southern States to North-
ern Colleges. Several cases of pre-
mature death among College companions,
from the Southern States, whose deaths
represented as having died of "Disease
of the lungs", have caused me to
think the subject worthy of consid-
eration. We know that the System
is more susceptible of Endemic in

fluences of all kinds, before puberty than at a later age. The enervating influences of malaria too, are more frequently seen among young persons from the Southern, than from the Middle or Northern States. May not a rigorous Northern winter then, acting upon a susceptible & enfeebled constitution be an exciting cause of some premature pulmonary lesion?

How to arrive at any laws as to the causes of this extreme variableness of the climate of certain localities, many circumstances are to be carefully considered. The elevation of the place: the geological structure of the soil: the direction of prevailing winds: but above all the proximity of any large body of water. The ocean has been called the great reservoir of heat, and

the climate around our northern chain of lakes has been found to be analogous to that on the Seaboard. At Snelling is far removed from the controlling influence of any large ~~body~~ body of water, and is indeed a rigorous climate. We will not stop here to prove, that the whole nature of man is modified by climate: altho a cosmopolite he is by nature a meteorologist. Long before the days of Aristotle, (who was the first to do so), treated on this subject systematically, the Shepherd & the Mariner were wont instinctively to read future ~~learn of~~ events upon the face of the heavens, & to say "tomorrow it rains, for the Sky is red & lowering". And that he is physically & morally changed by the elements around him has been the subject of remark from the earliest peri-

ods, and can be read with unerring truth in the pages of the historian, the naturalist, & the geographist. Would it not be wonderful then if the diseases at Key West & Ft Snelling were characterised by no distinct peculiarities?

Again, compare the invariable, warm, moist, malarial atmosphere of the Atlantic plains, with the variable, dry, & pure air of the Rocky Mountain regions. The physiologist proves that the excessive action of any function, or set of functions of the animal economy produces changes within the system. In the warm & moist climates, it is thought, that the action of the cutaneous & intestinal mucous surfaces, are increased, at the expense of the diminished action of the res-

piratory System. And vice versa in the opposite locality there is an augmented activity of the nervous, circulating, & respiratory System's: giving to the Constitution a phlogistic diathesis. Thus the Skin of the Negro, being a more active organ of Depuration than that of the White man, renders him a more fit Dwelling inhabitant of the warm, moist, miasmial climates of the tropics. Arguments upon this subject might be ~~multiplied~~ adduced from human physiology almost ad infinitum; but the striking peculiarities of organization & function, which the pathologist finds in the inhabitants of each of these regions respectively, can be satisfactorily accounted for in no other way than by recognizing & admitting the influence of Climate. Would

not the existence of these peculiarities there, "a priori", point to a difference in the character & treatment of diseases in these two localities?

In connection with this must be mentioned "Changes of electric tension". It is a theory advanced by Dr. Forry that the muscular development, the plethoric habits of body, & the sthenic character of diseases to be found in climates characterized by a cold dry atmosphere may be accounted for by an accumulation of positive electricity in the human organization. Now when we consider the chemical properties of this fluid, its non-conductability by dry atmospheric air, the attraction of its opposite particles, the easy disturbance of its equilibrium, & the great power of this as a che-

nical agent. Add to this the known baneful influence of the north east monsoon & the Sirocco which, from their low electric condition (as it is supposed), or their being in a negative state, exert an exceeding unfavourable influence on the animal frame, by suddenly attracting its positive electricity. Every thing that can be said upon this subject must be mere speculation based upon known philosophical laws. And although no positive facts can be brought directly to prove it, yet it is highly probable that changes of electric tension in the atmosphere do exert a very considerable influence upon the animal frame.

The geological formation of a country also has a manifest influence upon its climatic peculiarities. Viz.

~~we~~ have but to examine two different formations to enable us to understand how the peculiar effects ~~are~~ may be produced. Through a coarse and gravelly substratum, composed of a "debris" of sand-stone & other rocks, if favoured by the undulating surface of a dry, sandy, & gravelly soil, the rain can percolate, and leaves no deleterious agents behind. But a rich, deep, absorbent soil composed of tertiary & cretaceous secondary deposits abounding with marine fossil shells, if the flat (as is often the case, the embouchures of rivers for example), with an argillaceous substratum impervious to water, will yield by evaporation most of the rain which it receives, mingled with decomposed animal & vegetable matter which its moisture decomposed, carrying into the atmosphere must probably some new resulting compo

The length to which this treatise has already been extended, warns me to beware of dilating upon the other head I proposed in the outset, viz. "terrestial Emanations dissolved in moisture - or Malaria. The most ignorant, nor the most learned will deny its existence, & as yet the one can explain its essence as well as the other. Volume upon volume has been written upon this Subject, but from the animalcule theory of Drs Holland & Henle, to that of Sulphuretted Hydrogen of Prof Daniell, all is Speculation. It remains for Science in after days to detect its noxious principle: and as equally subtle & intangible truths have been demonstrated, who can doubt but that ere long, in this case also, Truth will supersede Speculation?

An

Inaugural Dissertation

on

Pericarditis

Submitted to the examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland

For the degree of Doctor of Medicine

by

Robert C. Coates

of Elkton Md

1845

To

Professor Bartlett

who will properly appreciate the feelings
that have prompted the deed,

these Pages

with a thousand Apologies for the Errors
they Contain are respectfully inscribed

by

The Author

Feby. 1. 1845

Aware of the existance of certain tissues contributing to the compositions of the animal economy, from the character of the secretion which it is their office to eliminate, denominated "Serous", the mind of the medical observer flies at once to the investigations of the lesions, structural and functional, to which these tissues are liable, the causes which induce & the remedial agents which antagonize them.

There are certain truisms,— none the less valuable that they are truisms,— and this is one of them,— that to die is the common destiny that men are required to fulfil, each in his own time and after his own fashion; and to effect this end more or less gradually and perceptibly, Inflamation appears heretofore to have been the means which from its numerous and potent resources Providence has been pleased to select in the majority of cases; a selection which will appear the less surprising when we have considered the

Efficacy and universal applicability of the agent.

With its features we are already sufficiently familiar and with its immediate origin less intimately than with its progress and tendency; and however active a stimulus it may heretofore have proved to the speculative invention of crack-brained theorists, stumbling-blocks ever besetting the footsteps of Science, still, in itself we find it sufficiently uniform, sufficiently monotonous, modified only in its results by external influences and peculiarities of situation in which it may have happened to establish itself. It is these results — these "terminations of inflamation" as Pathologists have termed them, that have made medical science what it is, at best, a science of uncertainty, based upon Problems, too often devoid of demonstration, ever hoping, ever fearing, scrutinizing the movements of nature with an anxious eye, exulting or desponding as the smiles or frowns.

With Inflamation in general we have nothing to do here. It were unprofitable, inappropiate and immodest to speculate upon speculation, to wander afar from one subject in idle chase of an ignis fatuus through labyrinthine paths, but to lose it in the end and retrace our steps confused and crest fallen. Let us rather seek the reptile in its haunts and observe its manners and habits as adapted to the abode in which we will imagine it to be already established,

Pleura, Pericardium, Peritoneum— these are some of the serous tissues to which we have alluded and whose morbid changes and their consequences have ever been alluring objects of Pathological research. Alike in superficial feature as in intimate anatomical structure, certain Pathological processes to which they are susceptible, and certain remarkable terminations to which these are ever tending, are essentially

the same in all. There are no alterations of its proper character, no departure from its peculiar function – that may not be induced in any other as in one, and in selecting the Pericardium as the subject of our observations here, we are guided rather by the importance of its relation to the viscus it envelopes, than by any striking exception it presents to the general law of serous inflamation.

As the Pleura to the lung, and the Peritoneum to the abdominal viscera – so the Pericardium as an appendage to the Heart, exercises a most important influence over the proper and natural functions of that organ, often, when diseased, fatally deranging those delicately monotonous operations upon which the existance of the creature so intimately depends

To induce those derangements, certain changes must be wrought through the

agency of inflammation, and these changes are such as universally attend the presence of this deleterious influence in the serous tissues — changes of texture and secretion in the membrane itself, and of form, volume, regularity of function and constancy of relation in the part it encloses, — changes for the most part conspicuous and palpable — but too often inappreciable save by their consequences.

We may trace the lesion from its origin to its termination — from the ruddy blush of capillary injection to the delicate but enduring fetters that "Adhesive Inflamation" has woven; sometimes stealing forward gradually and almost imperceptibly, at other times advancing with rapid strides, and clad in hues sufficiently familiar to the most careless observer.

We will proceed then to consider the physical alterations which occur to the Pericardium in the course of an - Acute Pericarditis as it has been denominated, and to investigate the influence of these alterations upon the functions of the Heart, and through them upon the natural and healthy Equilibrium of the circulation.

The Anatomical characters presented by the Pericardium when affected with Acute inflamation are in many respects identical with those observed in other serous membranes under similar circumstances; in fact, so striking does this family resemblance appear that to sketch with careless pencil the profile of any one were but to exhibit in truthful outline the most prominent features of an other, and the medical artist who

would paint from a sitting Pleurisy the portrait of a Pericarditis need yield no trembling pencil.

The changes which constitute the affection we are endeavoring to describe are simply these – I, Exaggerated vascularity observable in most cases, of variable intensity and more variable extent. II, deposition upon the surface of the Pericardium of a quantity of "coagulable lymph" of the older writers, constituting false membranes, and terminating in adhesions – results which, from their tendency to persistence, exercise an important influence over our prognosis, and make recoveries what we too often find them merely apparent; – III, – Effusion into the cavity of the sac of a quantity of serum, distending the bag and separating more widely its polished surfaces.

Of the Redness no elaborate description is necessary, it is not sufficiently uniform in its occurence, appearance or extent to justify us in awarding to its evidence even trifling value or of esteeming it conclusive ever. Sometimes uniform or stain-like in its character, more frequently dotting the surface in scarlet specks, and not rarely altogether absent, even though other indications of violent inflamatory action may be conspicuous. — We have estimated it at its full value when we have regarded it as an index simply of the presence of inflamation, regardless of its maturity or intensity.

The student need only be reminded of the partiality of all mucous and serous surfaces to the Ephemeral

vascular injections to be taught a proper appreciation of the feature in the recognition of the disease before us. Without the contemporaneous presence of both the other witnesses we have summoned, its testimony is but feeble, and wanting both it is null.

The elaboration of Plastic lymph", its diffusion over the surface of the Pericardium with that remarkable uniformity which has won for it the appellation of "false membrane" the establishment of those peculiar adhesions seeking to repair existing derangement and to prolong life temporarily by ultimately abbreviating it; the organization which finally ensues making the abnormal products part & parcel of the human frame, the evident importance of all these and their influence in retarding the march of Disease or deranging the antagonizing tactics of Art, — all seem to whisper warning to the curious

tyro for the first time approaching ground almost consecrated by the fruitless explorations of his predecessors, and admonish him to tread warily the intricate foot-paths in which so many pathological fanatics have been lost long since. ~~Nor is the similitude~~

This lymph, which conjointly with serous fluid forms the secretion of an inflamed Pericardium, is a peculiar concretion of a dirty yellow or straw color, somewhat resembling dough or thick paste in consistency and acquiring tenacity with age. Its deposition occurs in detached lumps less frequently than in continuous layers possesing all the uniformity of depth and extent exhibited by a carefully spread plaster fresh from the spatula, the pride of ambitious apothecaries. In thickness, it varies so constantly that the establishment of a standard is a task by no means insignificant and we have observed

sufficient precision in our sketch when we have described this as ranging from one to three lines. Smoothness and semi-polish characterize its adherent surface and in these consist all that is remarkable in the appearances presented there, but the hungry pathologist pauses as he turns it over to observe its free surface, and gaze in admiration on the repast before him. Here are dainties in abundance for his Epicurean Fancy, a feast to surfeit his Intellect and tempt his Imagination to run simile-hunting. With his eyes he devours its beauties, and like a child that has stolen the Mystic spell, the "Open Sesame" to mysterious larder with all its coveted luxuries of jam & jelly like then only tasted in dreams, he dives into suspicious looking corners and gropes in retired crevices for hidden sweets, tempted to the search by the very improbability

of their existance there. Nor is the similitude less striking when flying from sweet to sweet and mincing as he flies, (and by that very mincing made more gaudy) he stands irresolute, staring at the feast he knows not how to taste and bound by a spell he knows not how to break, until approaching footsteps frighten him off unease'd, unsatisfied, and he returns as he came, to enjoy the ideal for the substantial reality and once more glutonize in dreams.

Roughness, shagginess, floccularence, and every variety of this character that English substantives can be produced to express, are the first and most conspicuous appearances that meet the eye of the Student who for the first time handles a false membrane and observes its anatomical peculiarities; minute reticulations seperated by perceptible but irregular intervals; cells whose capacity is regulated by the thickness

of the layer they occupy; and finally, partitions separating these cells, whose regularity of hight and thickness like tiffling dots or lines in a drawing, materially modify the appearance of the whole!— all these have been interesting objects of scrutiny to Pathologists, tempting them to vie with each other in obscenity of description and suggesting comparisons as fantastic as they are useless, and embracing every thing in nature from the paraphanalia of lace work adorning a ladies night-cap — to a bundle of earth worms Isaacooniging in their sliminess.

Let the Student take the membrane in his hand, gaze upon it, cut, pinch, and tear it until he is tired and then compare it to — itself.

When the effused lymph is of long standing and not adherent it usually undergoes a shrinking

alteration in appearance; its color, which in its recent state is pale, acquires a deeper tinge somewhat resembling that of mahogany or a half ripened horse chesnut. It is during this stage that a secretion of bloody fluid occurs.

Now inquiries of most appreciable interest suggest themselves to the observer, inquiries as to the salutary end which nature proposes to effect by the employment of these means. That she thus seeks to repair the mischief which she herself has wrought must be evident to all who have investigated her mysterious operations for the motives which suggested them; but how this reparation is to be induced and maintained is the information desired, and thus has it been explained. —

The lymph which is first effused becomes in its turn a secreting surface, and from a thousand outlets yields fresh supplies of lymph and

serum distending the cavity of the sac and at last fatally embarrassing the heart's action. Now to prevent such disastrous termination the progress of this effusion must be impeded. "How:- Complete absorption of the fluids may occur, and thus the disease may expire, by the easiest of all deaths Resolution. But should this not occur, the next most desirable termination is Adhesion by which means the opposite surfaces having become intimately adherent, the process of effusion is "regulated" and time being allowed for some degree of absorption, an important prolongation of life is effected, but, as we have else where hinted this is all; and though the hour of sacrifice is postponed, Life is ultimately immolated upon the altar of Disease." The Adhesion so far from being a perfect reparation, gives rise to another form of Organic

disease which eventually proves destructive to the patient".

That the wistfully expected Adhesion with its helping hand does not always arrive, can be readily explained by the fact that previous Excessive effusion by interposing a quantity of fluid may have prevented the apposition of the surfaces necessary for their intimate agglutination. Hence that portion of the Pericardium reflected from the great vessels is almost universally adherent whilst below this is prevented by the presence of an excessive quantity of Serum.

The knowledge of these facts at once points out the importance of decision and promptitude in the employment of remedial measures, measures that by promoting absorption may make room for adhesion. A few words explanatory of this adhesive process are perhaps necessary.

To the deposition of lymph upon the opposite surfaces of the Pericardium other phenomena succeed; approximation, thickening, intimate blending and gradual organization by means of vessels susceptible of injection from the Pericardium. Thus the layers of lymph are transformed into cellular tissue, well characterized and differing in no respect from that found elsewhere in the body.

These false membranes acquire tenuity and firmness with age, tenuity, so remarkable that an apparent amalgamation of the folds of the sac without any intervening membrane occurs, suggesting not infrequently, to Pathologists doubts as to the existence of a Pericardium.

Adhesions are sometimes partial, presenting themselves in inflamed spots; and in these cases but slight impediment being offered to the motions of the Heart, the

lymph becomes converted by constant stretching into "long, loose bands of cellular tissue."

These cases of Partial Pericarditis are rare in occurrence or fatality and very seldom induce hypertrophy.

We come now to consider those serous Effusions which occur contemporaneously with the Elaboration of lymph.

These consist in a fluid of a greenish yellow color, not unlike the interior of a lemon, occasionally. Dr Hope observes rendered turbid or opaque by the presence of minute flakes of concrete albumen. Early in the disease serum is found to be present in considerable quantity, not rarely exceeding a pint. Absorption, supervening upon the subsidence of the inflamation, materially diminishes this, "reducing it frequently to a quantity

not more abundant than that of the concomitant exudation of lymph."

Should Resolution not be induced, now Adhesion established, a striking alteration is observed in the character of this secretion, for, henceforward being secreted not by the Pericardium but by the new membrane which with, organization acquires secreting properties. Instead of a clear, limpid serum, we now find a turbid, milky, thick looking fluid, in many respects, strikingly resembling pus. Frequently it becomes bloody and stains of blood are observed upon the lymph, appearances easily accounted for when we consider the instability of all newly-organized structures and their tendency to congestion and sanguineous effusion when subjected to any unusual excitement.

Atrophy is by no means a rare consequence of the compression exerted by this fluid upon the Heart.

The Anatomical characters of Acute Pericarditis, in any stage of the disease, present nothing more worthy of observation or interest than such as we have remembered here. Intimacy of Adhesion has been ascribed by Laennec to the influence of chronicity alone, and his assertion, that those adherent cellular layers, to which we have alluded, are the consequences of Chronic Pericarditis only, – no experience or analogy has been found to corroborate.

The Diagnosis of Pericarditis, sufficiently obscure even at the present day was not many years back classed among Medical impossibilities. Liable like all diseases to be mistaken for others of its Kind,

it was not until the introduction of a physical diagnosis into the circle of illegitimate offspring that science has adopted for its own, that judgment could be pronounced with any degree of confidence or conscious infallibility.

The rational symptoms, upon which the Practitioner relies for guidance in his attempts to distinguish the disease from others with which it is so frequently associated, are these; Fever of an acute inflamatory type; Pain. - pungent, burning, lancinating; aggravated by every full inspiration, and tending constantly to shoot into the right shoulder. This pain, it must be observed, is most appreciable in the cardiac region and may be increased to the decided discomfort of the patient by pressure with the fingers between the precordial ribs, and in the epigastric region forcing it upward into the left

hypochondrium, Sub-acute inflamation is attended by dull pain, wanting the lancinating character. Next the position of the patient is observed, his inability to lie upon the left side, preferring generally to be stretched upon his back. His respiration is anxious and but "half made up"; he is harassed constantly by a hard dry cough; has palpitation of the heart, the impulse of which is full and bounding, though for the most part irregular in strength.

These, together with extreme anxiety, cold perspirations, faintness, jactulation, features contracted and in most cases graced with a sardonic grin, and finally, "intumes and lividity of the face and extremities, the effect of obstructed circulation," — are features by which, with some slight mental exertion, we can conceive that the disease might possibly have been recognized in a very few cases.

But in the vacillating character of the pulse we find much that is curious and interesting to tempt the Speculative observer. This, which is found in all cases to be frequent, presents at the onset of the disease, peculiarities, which undergo a material change towards its termination.

Full, hard and jerking at first, it acquires after the lapse of a few days much less decided character. It then becomes much weaker than accords with the heart's impulse, and in alarming cases is found to be small, feeble, intermittent, irregular, and unequal, thus displaying in the progress of a single case almost every character that has been ascribed to it.

This feebleness, irregularity, and inequality of pulsation that so universally attend the disease in its advanced stages have been thus explained.

A mechanical embarrassment to the heart's action having been effected by means of a copious serous Effusion, congestion ensues from the inability of the organ to evacuate its contents, and these ineffectual efforts to relieve itself are attended by the feeble, irregular, and fluttering pulsation of which we have spoken.

Hence the obvious consequences of such impediment — Faintness, dyspnœa, lividity, coldness of surface, anxiety and a sense of suffocation, inevitably terminating in death unless relieved by Treatment as energetic as prompt, but lightly.

And now having touched but lightly upon that department of Diagnosis, where fallibility has rendered the detection of the

disease by such means only an utter impossibility; let us proceed to inquire into the merits of those agents upon which we rely for guidance in every form and stage of the disease.

We allude to the Physical Signs.—

Among the most obvious of these is the striking augmentation of the heart's impulse, which not only shakes the whole anterior chest, but is attended by a remarkable jerk which is imparted to the whole arterial system.

The pulse, distinctly perceptible over the whole body, is accompanied every where by this jerking character, and frequently a peculiar thrill attends it, imparting to the finger a sensation somewhat similar to the vibration of a cord suddenly put upon the stretch.

This jerking pulse and its aggravation

of the heart's impulse occuring simultaneously, consist essentially in a spasmodic contraction of the heart, attributable to the irritability which accompanies the existing inflamation.

The sounds imparted to the ear through the medium of Auscultation, consist in the friction or to-and-fro sound so familiar to all who have observed throughout its progress a single case of Pleurisy— This unnatural sound may be explained either by the suppression of the natural secretion occuring in the earlier stages of the disease, or by the friction of the rough surfaces of Effused lymph. But first, in importance, of these abnormal sounds is the very distinct bellows Murmur which

accompanies the ventricular systole.
"This" says Dr Hope "is universaly present when the heart presents the increased impulse above described". This bellows murmur may be attributable either to the extreme velocity with which the blood is propelled "in consequence of the morbidly abrupt contraction of the heart", or to inflamation established in the valves, diminishing the diameter of their orifices. By many authors it has been questioned whether this sound is ever present in simple Pericarditis. Dr Dunglison maintains that in all cases, it indicates the co-existence of inflammation of the Endocardium.

As might be inferred, the resonance of the precordial region is found to be dull on Percussion, and the accumulation of fluid adds to it's impulse an undulatory character.

A perceptible prominence of the cardiac region, the consequence of temporary Effusion, is noticed by Louis, but we have reason to doubt the existence of such prominence in other than very young subjects whose cartilages are soft.

The causes of Pericarditis differ not materially from those of Pleurisy. The usual accidents which effect the establishment of inflammation in general operate here; these are Cold, febrile excitement, heavy blows or pressure maintained for a length of time upon the precordial region. The inflammation may be but the Extension of that already existing in the lungs or pleura, and the frequency of such occurrence should lead Writers to have pointed out to Pathologists the propriety of acknowledging its importance as an Exciting cause. But all these causes operating together exert not half the influence in the production of Pericarditis

that has been justly ascribed to Rheumatism.
The existence of the one must even justify us
in looking confidently for the other, and know-
ing this, the frequency of occurrence of Peri-
carditis in young persons needs no further
explanation.

The treatment of Pericarditis,
sufficiently plain and based upon established
and invariable principles, still presents
to the practitioner many points of startling
importance.

The necessity of promptitude
in the employment of Antiphlogistic
measures, as energetic as the circumstan-
ces of the case will justify cannot be
too earnestly impressed upon the mind.

No atonement can be made for loss of
time. The patient existance is scarcely
separable from the passing hours,

, and the loss of one may be the loss of the other.

In recent attacks where the patients health has been preserved, free venesection by a large incision must be employed, reducing him to the verge of Syncope,

The effect of this disappearing and reaction commencing, from twenty-five to forty leaches should be applied to the precordial region, and repetitions of these at proper intervals should be employed until the pain is subdued.

When from age, previous habits, debilitated constitution or the advanced stage of the disease the patient is unfitted for the toleration of such heroic measures, local bleeding freely employed, will be found as Effectual as general, and for this purpose cups should be used, as the expedition with which the blood is thus abstracted renders the impression upon the system more prompt and appreciable.

to his customary occupations. Now this absorption is not to be effected by simple antiphlogistic measures; for this purpose recourse must be had to mercury. Immediately after the first depletion and a purgative, administer from five to eight grains of calomel or twelve of blue pill in conjunction with a grain of opium to prevent catharsis. Should the internal use of the mercury be disagreeable in its effects, inunction may be substituted or superadded. The beneficial effects of this treatment will be apparent as soon as the mouth is affected.

The employment of blisters will be indicated by the continuance of pain after the period has elapsed for the application of leeches. The repetition of these which will be often needed should be regulated by the judgment of the practitioner, as should the employment of all remedial measures

Sedatives may be required to allay much nervous irritability, in which case striking benefit will be derived from the employment of a draught consisting of fifteen or twenty drops each of the tincture of hyoscyamus and digitalis to be administered three times daily.

The weakest slops should constitute the diet of the patient, as barley water, arrow root, gruel and weak tea.

Secondary attacks of Pricanditis though of frequent occurrence are by no means as alarming as the original, and distinctly indicate the importance of care and discretion in the employment of remedial measures.

So; we are safely delivered, and with a silent prayer for mercy on its inheritance of sin, we commit the babe to the fostering care of the dry nurses of the Faculty.

An

Inaugural Dissertation

On

Inflammation in different tissues

And

Its general results

Submitted

To the examination

Of

The Provost Regents and Faculty

of Physic

Of

The University of Maryland

For

The degree of Doctor of medecine

In the session of 1844–5

By

Wm. A. Cobb. Baltimore

Inflammation.

The mode by which inflammation is excited. A part being irritated, becomes the centre of fluxion. Inflammation is always preceded by irritation. The parts most subject to it, are those that are the most vascular, and sensitive. The presence of inflammation is indicated, by the four following signs, redness, swelling, heat, and pain.

Redness, is caused by an afflux of blood to the part, dilating the small vessels and cappillaries, allowing those to receive red blood, which in health received only white, as is illustrated in inflammation of a tendon, or ligament, neither of which in health have much vascularity, New vessels are formed. The degree of redness depends on the depth or vascularity of the part. There may be redness in congestion, without any inflammation being present.

Swelling is caused by an increased volume of blood in the part, and by an effusion of serum, lymph, or fibrine into the surrounding cellular tissue.

Heat not much increased, when examined by the thermometer, it is much less than might be expected from the patients sensations.

Pain arises from the infiltration of serum, and engorgement of the part with blood, thereby causing the nerves to be put upon the stretch, they being morbidly sensitive.

The results of inflammation are Resolution. Adhesion. Oedema. Softening or ramollissement. Hardening or endiercissement. Ulceration. Suppuration. Hepatization. and Gangrene.

Resolution is cessation of inflammation, and removal of the effects. the lymph or serum being absorbed.

Adhesion arises from lymph or fibrine, being thrown out which becoming organ-ised glues the parts together.

Edema is where serum is effused into the cellular tissue which the absorbents are not capable of taking up.

Ramolissement sometimes the result of inflammation of any organ, particularly of the liver, lung, or spleen, it is more liable to result from acute, than chro-nic inflammation.

Endiercissement is less apt to result than softening, most commonly results from chronic inflammation, the effusion of lymph becoming organised.

Ulceration it is the process by which ulcers, or abcesses, are produced, it is a chasm formed by the removal of parts back into the system, by the action of the absorbents.

Suppuration or the formation of pus,

this is a yellowish secretion, containing globules like the blood, floating in se-rum or a fluid closely resembling it.

Hepatization, as in the lung which being filled with blood, and coagulating, gives it the consistence and colour of the liver.

Gangrene, is the loss of life in any part, the parts most liable to it, are those that are the most vascular and sensi-tive.

Inflammation acts differently depending on the organ or tissue in which it is situated, and, the habits and constitut-ion of the patient.

When seated in the skin, it usually beco-mes extensive, spreading sometimes over the whole surface of the body, seperatin-g the cuticle, in the form of a vesicat-ion, containing serum, it sometimes pro-duces fever, and at others is preceded by it.

In the cellular membrane, it causes an effusion to be poured into its cells, which coagulating often completely obli-terates them, and if the inflammation continues for any length of time, it will be likely to suppurate, forming an abc-ess, and the pus contained in it will be discharged by ulceration. When chronic it sometimes causes tumours of various kinds to be formed in it.

Inflammation of a muscle, is known by the verry severe pain felt along the whole of its course, and by the spasm-odic twitchings which accompany it, for instance, in a fracture where the limb has been carfully dressed, they often displace the fragments by their involuntary contractions, particularly when the patient is going to sleep, he having then lost the power of controlling them.

Tendons are not as liable to inflame as most other parts, but when they do. as in those of the fingers, the forearm swells, becomes red, and painfull, and pus is secreted in the sheath along the whole of its course, punctured wounds of tendons are verry dangerous. they are more likely to produce tetanus than wounds in any other part of the body.

Arteries seldom become inflamed except from wounds, or the application of a ligature, it then extends sometimes even to the heart, producing softening of their coats, and even suppuration.

Inflamed veins, if felt with the finger, seem like hard cords, they are extremely tender to the touch, upon examination the inner coats are often found to adhere, they sometimes ulcerate, and, suppurate, when it arises

from the application of a ligature. the inflammation is generally found to extend below the point at which it is tied, it seems to be caused by their engorgement with blood.

Inflammation of the nerves is not common, but when they become so the pain is very severe there is a constant pain in the parts to which the nerve is distributed, there is no redness of the skin, though it is tender to the touch.

Ligaments like tendons are not prone to inflammation, but the synovial membranes which line them are highly so, and they most generally suppurate, the pain is very severe and throbbing.

Cartilages sometimes ulcerate during inflammation, and become entirely destroyed.

Bones are sometimes liable to become inflamed, in case a bone is fractured. the two ends would not unite without some degree of inflammation, death, or mortification of bone, is also the result of inflammation.

Inflammation must be either healthy, or unhealthy, it can not always be cons-idered as a disease, for no wound ca-n be repaired without it not excepting the wound made in phlebotomy, the inflammation causes lymph to be thro-wn out which becoming organised unites the edges together, also when a ligature is tied upon an artery unl-ess some degree of adhesive inflamm-ation supervened haemarrhage wo-uld occur, and the patient would die from it.

Inflammation is either acute or chronic. the first passes through its stages with

great rapidity, the second is more slow
in its progress, the process is the same
but its features are less strongly expre
ssed, the characters, than of acute infl
ammation are violence of symptoms
and rapidity of progress, while those
of chronic inflammation are mildness
of symptoms and slowness of progress, it
can not be verry violent and of long du
-ration. I do not mean that chronic in
-flammation is less destructive or dang
-erous than acute, the latter is genera
-lly more under the influence of rem
-edies than the former, it is commonly
soon brought to an end, whereas chronic
inflammation is sometimes obstinate,
and leads to verry serious changes in the
structure of the part in which it is sit
-uated, when situated in the interior of
organs it tends to indurate and thicken
them, and to the effusion of pus when

it affects membranes. it is more common in we-ak and debilitated persons than in those of a strong and healthy constitution. acute inflammation may subside into chronic. and chronic may be aggrava-ted into acute.

Causes of inflammation. it sometimes ar-ises from debility. the blood returning to the heart with difficulty. the arteries are then called upon for an unusual exertion. an irritable constitution is prone to inflam-mation, and when produced it is general-ly dangerous and extensive. some persons are naturally irritable while others bec-ome so from disease. thus in compound fractures, where the patients constitution suffers much the parts upon which he lies becomes inflamed, and suppurates.

The exciting causes of inflammation. are those which produce an unnat-ural state of the part. calling upon

nature for its restoration. as a cut or bruise.
and the application of poisons
Boerhaave insisted that inflammation
is produced by an obstruction in the
capillary vessels. obstruction he conceived
might be occasioned by too profuse a
flow of any of the excretions. and by
heat. or the application of any other
cause which dissipated the thinner
parts of the blood. thereby producing
viscidity. when the thickened state
of the blood did not exist before
the production of inflammation. he
imagined that the larger globules
of the blood found their way by some
accident into the capillaries. and
caused an obstruction. but when the
perspiration. the flow of urine. or any
of the excretions were suppressed. then
he supposed the capillaries became
so much distended as to allow the

thicker parts of the blood to enter, creating a more permanent obstruction, and this state he termed an Era Loci. Inflammation has a disposition to divide blood into its component parts for in blood drawn from a healthy person it seperates only into serum and red particles, but in inflammation if it be allowed to stand undisturbed it seperates into fibrin, red particles, and serum, the red particles, with some fibrin will be collected at the bottom of the basin, but the greater part of the fibrin forms a yellow surface on the crass amentum, or what is called the buff of the blood, and the serum will occupy the surrounding space. The coagulation of the blood is generally found to be slower than usual, and the red globules are precipitated, so

that the fibrin having lost the red particles, contracts with great firmness resembling a piece of leather & the adhe-sive matter was at one time suppo-sed to be albumen, but it has since been discovered to be fibrin. Mr Hunter called it coagulable lymph, the serous membranes secrete a watery fluid in health, but during inflam-mation fibrin is poured out which coagulating, produces the hardness which we find in inflamed parts. thus the serous membranes readily assume the adhesive inflammation, by which they become united to each other. the time required before the commencement of adhesive inflammation, is different according to the structure of the part, and the nature or state of the constitu-tion, when adhesive matter has

been thrown out blood vessels soon enter and it becomes organised. this process is of great importance in surgery. without it no opperation could be per-formed with success.

Treatment of inflammation. this is either constitutional, local, or both combin-ed. no vital organ can be deranged in its functions without causing a gener-al disturbance in the system. the treat-ment must then be constitutional. the most powerfull constitutional remedy for inflammation is bleeding. its beneficial effects result from its reducing nervous power, and by lessening the momentum of the circulation. the indications for general bleeding are a hard and quick pulse. the quan-tity of blood taken in inflammation is generally from ten to twenty ounces. varying according to the amount of

inflammation. where situated. and the condition of the constitution. in bleeding it should be drawn from a large orifice. for if it be taken slowly the vessels have time to accomodate themselves to the quantity of blood left in circulation. in inflammation all the secretions are generally diminished or suppressed. those of the liver. kidneys. skin. and intestines. are of the most importance. they must be restored. another mode of reducing inflammation is by giving tartar emetic in small doses so as to keep up a constant nausea. in the treatment of chronic inflammation. your remedies must have a slow and gradual action on the secretions. in chronic inflammation of the joints calomel and opium assisted by counter irritation are of great importance. cold applications have been recommended

by most writers. it reduces the pulse and nervous excitement. and abstracts heat. warm and moist applications are usefull. leeching and cupping are also of great service. counter irritation is made by applying setons. issues. blisters. and by tartarised antimony combined with lard. in inflammation of the extremities the limb should be raised. if the leg it should be placed on an inclined plane. or the arm in a sling. rest is absolutely necessary during the course of inflammation. for exercise increases the action of the heart and arteries. it is the most important part of the treatment in inflammation of the joints

An

Inaugural Dissertation

On the

"Anatomical Lesions & Physical Signs

of

Pneumonia"

Respectfully submitted to the Examination

of the

Provost, Regents & Faculty of

Physic

of the

University of Maryland

for the Degree of

Doctor of Medicine

By Philip H Austen A.M.

January 29th 1845

" of Baltimore

M-d

With full confidence in the abundant richness and significancy of our mother tongue, we shall use it in the expression of whatsoever ideas we may have occasion to advance in this Thesis, rather than have recourse to Execrable Latin of our own Composition, or the more Elegant Latin of others.

In the choice of a subject the opportunity was presented either to exhibit the depth & accuracy of our researches by the investigation of some minute point in Anatomy & Pathology, Else to give proof of the vigor of our Reasoning Faculties by the discussion of some one of the Thousand Speculative Theories with which Medical Science is burthened. We have preferred, however, to devote that time which is required in the preparation of a Dissertation to the investigation of some subject of practical value.

Pneumonia, important from its frequency & gravity, and as involving few points of fruitless Speculation, was our Choice: and, after having Examined the Entire subject as thoroughly as our time & opportunities permitted, we now proceed to express in our own language such Statements & inferences of others as the limits of a few pages

will allow.

Pneumonia

It the name very generally given Acute inflammation of the Substance of the Lungs. It is known also by the names Peripneumonia; P. Vera; Pneumonitis, Pulmonitis and, in less learned phrase, Inflammation of the Lungs, or Lung Fever. Andral uses the term Pleuro-Pneumonia in the same sense, but it is better restricted to those varieties of the disease in which the Pleuritic Complications assume a prominent & urgent character.

Symptomatically, we would define it, in the words of C. J.B. Williams, to be an Acute Inflammation, characterized by Fever, with more or less pain in some part of the chest; Accelerated & sometimes oppressed breathing; Cough with viscid rusty colored Expectoration; at first the Crepitant ronchus, afterward bronchial respiration & bronchophony, with dullness of Sound on percussion in some part of the Thorax. But, inasmuch as any one or several of these Symptoms may be occasionally absent we shall rest our definition on a surer basis by reference to Pathology. Pneumonia, therefore, consists Essentially of an Acute inflammation of the parenchyma of the Lungs, frequently but not Essentially involving necessarily

ving the Pleural covering.

Pneumonia may invade one or more entire Lobes, in which case it is called Lobar P., or it may be confined to several Lobules, whence the term Lobular, or again it may implicate separate vesicles, and to this variety Laennec has given name Vesicular Pneumonia. It attacks the lower Lobes of the Lungs oftner than the upper in about the proportion of 7:1, but is in the latter case more frequently fatal, hence the discrepancy which exists on this point between clinical & post-mortem observation. In about the same proportion does it occur in the right lung over the left. Double Pneumonia is in adults of comparatively rare occurrence, but at the extremes of life it is more frequent, especially in early childhood. Why this preference of locality should exist, we will undertake to explain. As soon as the analagous preference of Tubercle for the summit of the left Lung shall have been made clear — until then we must be content to know that it is so; but why, we cannot tell.

Pneumonia consists essentially, as has been stated, of an acute inflammation of the substance of the Lungs. This gives rise to certain Anatomical Changes, which — thanks to Modern Science for the means — we are enabled, with very considerable accuracy, to detect during life, through an-

tain Physical Signs, to which these changes give origin
Again this inflammation & these Consequent Anatomi-
cal conditions produce certain derangements of func-
tion, both in the Lungs, in the System at large, Consti-
tuting an important Class of General & Rational Symp-
toms, which formerly were the Exclusive, & still are
a very Essential means whereby to recognise the access
& advance of the disease.

Andral & Laennec have divided Pneumonia into the
three Stages of Engorgement, Red Hepatization, & Drab
Hepatization (for so the term grise should be rendered, & not,
as in some English works grey) or Purulent Infiltration
If we press with the finger the Surface of a Lung in the
first Stage – that of Engorgement – we shall find it to
yield more readily than in the healthy State, giving less
of the Crepitant fuel, & upon removal of the finger the
pit will remain as in an Edematous limb, & the part
Compressed will seem like a Semi fluid mass under the
pleura. When cut, the lung discharges a quantity of
Serum, sometimes copious & clear & again turbid & scanty,
& presents a red color varying from bright crimson to
an almost black hue. This escape of Serum would
seem to depend chiefly upon the intensity of the inflam-

mation, & the coagulability of the blood after death; while the variations in color are attributable to the duration of the inflammation, the color of the blood in the system — varying much at the different periods of life & under differing conditions of body — & the presence, in greater or less degree, of the black pulmonary matter. On application of the finger to the cut surface it meets with less resistance than in the healthy lung — an effect attributed by Andral & Chomel to the absence of air which in the sound lung enabled the solid portions to elude as it were the pressure of the finger. Subsequently Andral abandoned this explanation, & assigned the diminished resistence to the mechanical effect of the presence of the blood. But the engorged lung may be torn more easily than the healthy one, & again, if washed free from the blood, it still exhibits lessened consistence, & therefore, though absence of air & presence of blood may act as mechanical causes, we think, with Dr Williams, that there is also diminished Molecular Cohesion.

Attendant upon the progress of this first stage is a constantly increasing diminution of the vesicular structure, until at last, we find, in the

Second Stage – that of Red Hepatization – that it is entirely absent. The vesicular structure is in this stage entirely obliterated though Pathologists differ as to the manner. Andral & after him Laennec, say that it is by thickening of the parieties of the vesicles with deposition in their cavities of a concrete fluid. Dr Williams denies the existence of any such fluid, & supposes the thickening of the vesicles to be attended with compression by the inflamed intervesicular tissue. He further conjectures that, if we admit the possibility of increased compression, caused by swelling of the interstitial tissue, without implication of the vesicular membrane, we may thus explain the non granular appearance in those varieties of this second stage to which the terms splenization & carnification have been applied.

To this Pathological Condition is attributable that peculiar granular appearance of a hepatized lung, distinctly seen upon scraping or wiping its cut surface, or better still by tearing it. Whether the individual granules consist of one vesicle or one of Reisseisen's bunches it matters not to determine – we incline to the latter opinion.

Besides these granules, which are somewhat lighter in color than the surrounding substance, there may be

seen numerous lines and specks almost white, which are the sections of the interlobular septa, less involved in inflammation, and of bronchi or vessels which have quite escaped. The prevailing color of the lung is not so dark as in the first stage, but is less uniform, presenting generally a marbled appearance. Its consistence & weight are very much increased so as to resemble the liver, whence the term Hepatization, and its substance is more easily broken down with the finger.

If the disease continue to advance, unchecked by the death or recovery of the patient, the lung will now begin to assume a whiter color, attributable, possibly, to the deposition of the albuminous portion of the blood, to the exclusion of some of the red particles — at least such is the explanation we have seen; it would seem to be purely conjectural, & we are not inclined to attach much value to it. The lung has now attained its greatest consistence, though its cohesion is even less than in the first or beginning of the second stage. In the lighter specks, before spoken of as the granular bodies, minute points of a yellowish secretion may be perceived which continue to be more & more developed till at length that degree of suppuration is established which gives to this

Third Stage the name Purulent Infiltration, called also from the yellowish-drab color of the lung Hepatization Grise. At

first the consistence of the infiltrated tissue is sufficient to admit of it's being cut, though very slight pressure will reduce it to a thick purilage. The prevailing yellowish tinge is varied by reddish streaks or spots, marking portions yet in the second stage, and is in some places changed to a grey or bluish color by the admixture of the black pulmonary. As the suppuration advances, the pulmonary texture seems to yield before the softening purulent matter, till at last we have nothing left but an irregular network of vessels & Bronchi buried in pus.

Such is the termination in the few cases in which Pneumonia runs it's course, but true Abscess of the lungs is of rare occurrence for reasons assigned by Laennec - first that Lobar Pneumonia will usually prove fatal before it shall have reached this stage, & the Lobular variety will yield either of itself, or by the aid of art. The numerous cases of Pulmonary Abscess, recorded in the older works, were doubtless Tubercular vomicæ, a mistake, which, ever in the present accurate state of knowledge on this point, it is sometimes impossible to avoid making.

Of the very rare termination of Pneumonia in Gangrene we shall here say nothing, but remark in fine, on the subject of Anatomical Lesions, that, in the event of recovery from any of the three stages, these Pathological Conditions reappear in the inverse order of their access,

with some minute differences, as detailed by Laennec, but which the limits of our Thesis will not permit us to notice. We now proceed to Enumerate those Physical Signs by which mainly those Lesions, just Enumerated, may be recognized during life. At the onset of the inflammation there will be heard, upon application of the Ear or Stethescope to that part of the Chest nearest the Seat of the inflammation, a fine crackling Sound, Compared by some to the noise produced by rubbing a lock of hair between the fingers close to the Ear, by others to the Crepitation of Salt when thrown on the fire, but we think best Compared to itself by any who has once heard it. This is the Crepitant Ronchus of Laennec, & Constitutes an invaluable Diagnostic Sign inasmuch as it is invariably present, though it may not be as invariably detected. At first it is accompanied by the natural respiratory murmur, but, as the congestion which gives rise to it increases, this natural murmur gradually gives place to, & at last wholly disappears before, the Crepitant Ronchus. This Ronchus, heard at first during the entire act of respiration, becomes by degrees, during the progress of the first stage, less audible - is heard only at the end of Each inspiration - then only on Coughing or taking a deep inspiration - At length, as the lung enters the Second Stage of Red Hepatization, it Ceases altogether, & in its stead we have Sounds of an Entirely new Character.

of the supervention of the third Stage we have no Physical S
except where occasionally there may be heard near the root o
the lungs a coarse Mucous Rouchus caused by the passage
of purulent matter along the Larger Bronchi.

The first & most constant of these may be characterised as a whiffing sound, similar to that produced by blowing through a small quill. It is easily distinguished from the previous diffused ronchus by its distinctness, amounting at times to positive shrillness, & occasionally, if the stethescope be used, conveying the sensation as if one were blowing into the ear from the far end of the tube. This is what Laennec has termed Bronchial Respiration, a variety of which he has occasionally noticed possessing a puffing character, as though the sound were interrupted by the occasional intervention of some non conducting substance.

Accompanying this Bronchial Respiration there is often heard a peculiar modification of the voice which has been called Bronchophony — a sound which in truth words cannot adequately describe. Our Books tell us, & be sure, that it is the voice, heard more distinctly than in the healthy lung, & modified as though passing through tubes, but till I shall have heard that modification I am as much in the dark as ever. From Perfect Pectoriloquy it may be distinguished by the superior distinctness of the latter, & from the Imperfect in being heard over a greater surface.

Coincident with the Crepitant Ronchus there is Dullness on Percussion over the seat of the inflammation, which increases with its progress till in the second & third stages we obtain only the same flat sound that is elicited over the

region of the Liver.

In the rare event of Abscess or Gangrene there will occur the Physical signs of Cavity as in the case of Tubercular vomica - Bronchiloquy, Cavernous resonance, & metallic tinkling - of which our limits forbid us to say more. Should there be on the other hand arrest & resolution of the inflammation at any period of its progress these Physical signs must necessarily return in order.

When the Pneumonia is extensive there will, in consequence of the suspension of respiration in the affected part, be an increased demand on the healthy, which will give rise to the noisy respiration, so marked in Children, & hence, called Puerile.

Such are, in brief terms, the Physical signs of Simple Pneumonia, practically available only in connection with, and as resulting from, those Pathological conditions which they indicate. A few words must therefore be devoted to this connection.

The Crepitant ronchus, as has been stated, begins & ends with the stage of engorgement, & is caused as all admit by the passage of air from the vesicles through minute Bronchi of diminished calibre - but how diminished? Andral, in classing the Crepitant as a variety of the mucus Ronchi, makes this obstruction to consist in an unnatural secretion of mucus, in its escape through which the air

breaks into exceedingly fine bubbles thus producing crepitation. But if this be so, why it may be asked, does not the crepitant Ronchus accompany Extensive Bronchitis: It certainly does not. Laennec, than whom none was ever more accurate in the detection of minute differences of Sound; states that there is a difference between even the finest mucus Ronchus & the crepitation of Pneumonia which says he hardly convey the idea of humidity. 'Tis true that in another place he seems to contradict this statement & coincide in part with Andral, yet how can we be competent to decide which of his statements are correct? In this dilemma, we shall adopt that opinion which we have decided, as confirming the explanation of the origin of the Crepitant Ronchus given by C. J. B. Williams, which is substantially as follows

The minute Bronchial ramifications are partially compressed in consequence of the distension of the Capillaries & the interlobular effusion of Serum. This partial Closure is rendered complete by the secretion of a viscid mucus from the inflamed Bronchial membrane, in its forcible escape through which the air is divided into minute bubbles; & the passage of these bubbles through an almost infinite number of Equally compressed tubes gives to the crepitant Ronchus of Pneumonia its characteristic Equability

That the secretion is viscid we have evidence in the very limited amount of the expectoration & its extreme tenacity, whereas in Catarrhal Bronchitis & Pituitous Catarrh, where the expectoration is more copious & less viscid, & where there is absence of compression of the air tubes, as in Pneumonia, we hear the less uniform sound, termed a fine mucous ronchus, conveying more the idea of moisture. In Pulmonary Oedema & Apoplexy, on the other hand, where we have a physical condition more closely allied to that of Pneumonia, we hear, more or less perfectly, the characteristic crepitation, modified, perhaps, in the first case, by a greater tenacity of the Bronchial secretion.

Since, in the early stage of the disease, all the minute air tubes are not compressed, we may easily see why then the crepitant ronchus should be accompanied by the natural vesicular murmur. As this narrowing becomes more universal, this murmur ceases, giving place to the crepitation which, in its turn, in consequence of the thickening of the parietes of the vesicles, increased compression by the interstitial tissue, grows less distinct, till, on the final obliteration of the cavities, it ceases altogether.

We have now, instead of the spongy texture of the healthy

lung, which is a very imperfect Conductor of Sound, a dense Solid Substance well adapted for the transmission of the more deeply seated Bronchophony & Bronchial Respiration, which previously existed, but which, from the nature of the conducting medium, & the presence of other Sounds, could not before this be heard? If now we will imagine a thin Stratum of Sound lung interposed between the ear & the seat of the Pneumonia, by the Entrance & exit into & from which it becomes now a good now a bad Conductor of the Sounds below, we can understand Laennec's Explanation of the origin of the puffing character of the Bronchial Respiration sometimes heard.

The Connection between the dullness on percussion & the Solidification of the lung, with which it is in Exact proportion, is dependent on a Law of Acoustics so well known that there is no occasion to do more than simply state the fact — and, with this statement, conclude our Enumeration of the Anatomical Lesions & Physical Signs of Pneumonia.

Our Thesis has now acquired a Commendable size & we are loath to mar its fair proportions; therefore it is that we pass in Silence the General Symptoms, Pathology, Aetiology, Diagnosis, Prognosis & Treatment of the Inflammation under

Consideration, & forbear any mention of its varieties or Complications. It were impossible to compress so extensive a subject as Pneumonia into the compass of a Dissertation limited to Some 10-20 pages, & hence the necessity of selecting Some one or two of its many parts. — with this apology the preceding observations are respectfully submitted

By B Coulter A.M.

Jany 29th 1845

Baltimore.

The Studies of the Physician & Surgeon Compared.

An Inaugural Essay, for the Degree of Doctor of Medecine. Submitted to the inspection of the Provost, Faculty of Medecine & Board of regents, of the University of Maryland.

by

Judson Gilman. of N. H.

January 31st

1845.

To

Nathan R. Smith M. D.

Professor of Surgery in the University of Maryland.

It affords me great pleasure, to be permitted to inscribe to you this humble testimony of my esteem, not only for the unsurpassed manner in which I have been taught from the chair which you so honorably fill, but also, for your many virtues, & for the many marks of kindness & attention which I have received from you as

Your private Pupil.

J. G.

To

Elisha Bartlett M.D.

Professor of the Theory & Practice of Medecine, in the University of Maryland.

As a tribute of my high esteem and regard for the many qualities which have so exalted you to the Station which you now occupy, not only in the University of Maryland, but also, in the hearts of all the lovers of true Medical Science, permit me, Sir, to inscribe to you this Essay.

J. L.

The Studies of the Physician and Surgeon compared.

The comparative degree of perfection to which we have now arrived in the healing art, & the still greater degree of perfection to which we wish to arrive, render it necessary, (from our present knowledge of obtaining excellence in any pursuit, by division of labor,) that these two great correllative branches of the Science be seperated into distinct professions.

The Surgeon deals almost exclusively with the mechanical apparatus of man, mechanically, the physician, in addition to the influence which he possesses over his physical organization, has a much greater control through the (medium) of the mind. Nor is it possible to limit his researches to the physical & mental man, even, but he (must necessarily investigate, & that deeply too,

the noble Sciences of Chemistry, Botany and Mineralogy, either one of which opens a field for investigation so extensive & so full of interest, that the long lifetime of a brilliant mind is far too short a space for so limited a comprehension to exhaust.

'Tis true, that the Surgeon, Strictly, need not understand these Sciences, still, his field for study is almost as inexhaustible, for even now, after the lapse of so many ages, & after the study & investigation of so many brilliant minds, some of the simplest truths connected with our ~~Science~~ systems, the functions of some of the organs are not known. Well may it then, not be surprising, that many of the more minute ramifications, the relations of organ to organ, of system to system &c. may be comparatively obscured & dark.

As the study of both Physician and Surgeon is the human system, they equally require the knowledge of some parts, as for instance

the relation which one System bears to another, and the Sympathy existing between them.

It is not absolutely necessary for the physician to know the relation which the femoral artery bears to the vein & nerve, a fact of so much importance to the Surgeon, nor is it indispensible that the Surgeon should have a knowledge of the minute & specific effects of certain medicinal Substances administered under certain circumstances, without knowing which, the physician is but a novice in his profession. The Surgeon must have a thorough knowledge of the anatomy & relations of the parts & organs, the Physician, the functions of those organs.

The operations of Surgery, under similar circumstances, are to be accomplished similarly, but in the treatment of internal disease, a thousand modifications from contingent causes are to be observed. We will suppose a patient had a compound & comminuted

fracture of the Femur, involving the Knee joint. Would not every prudent Surgeon treat the case in the same manner, & be justified in amputating the limb at once? But would every physician, under ale circumstances, treat in the same manner every case, or even the same case, of Typhoid fever, or any other acute or chronic disease?

In order to illustrate our assertion that the knowledge of the Surgeon is not indispensible to the Physician & vice versa, let us suppose we have two patients, one with Typhoid fever, & the other with a fracture of the shaft of the Femur. In the first case, how shall we diagnose. There are all the symptoms of a febrile disturbance, but is there any one, are there any two or three symptoms usually occurring in the disease, which may not be absent during it entire progress? Is there

any one, are there any two or three symptoms which in themselves are pathognomonic of the disease? Can we place our finger on any one or any set of symptoms and say, by it or them are we sure? No, with our present knowledge of the disease our diagnosis cannot be founded on any positive physical signs, it must be circumstantial & rational, not absolute. — The following symptoms may all, or in part only, be present during the course of the disease. - Chills, accompanied with, or immediately followed by headache & pains in the limbs & back, gradually disappearing in a few days. Heat of the skin, thirst, acceleration of the pulse with an exacerbation at night, loss of appetite, great muscular debility, dullness of the intellect gradually becoming delirious, restlessness, somnolence or vigilance, picking at the bed clothes,

or at imaginary objects, epistaxis, ringing or buzzing in the ears, the skin of the chest or abdomen having the appearance of a scattered rose coloured eruption, the Tongue dry, glutinous, cracked, red, brown or blackish & protruded from the mouth with the greatest difficulty, often requiring many minutes & oft repeated requests on the part of the physician, sordes upon the teeth, diarrhoea, stools thin, watery, dark or yellowish colored & sometimes bloody, tympanitic distention of the abdomen, dulness on percussion over the spleen, & a gurgling upon pressure upon the right iliac region with a sonorous ronchus over the chest. But these symptoms are very seldom all present in the same case, some of the most characteristic may be wanting, & only one or two of any diagnostic importance present.

Again, the same symptoms which we call diagnostic of Typhoid fever are to be observed in these diseases, so that the most accurate observers, even Louis himself has been deceived in regard to the nature of the disease characterized by Typhoid symptoms. We have, however, upon mature deliberation & with accurate observations, pronounced the disease Typhoid fever.

Let us now observe the comparative ease with which we may diagnose the case of the fractured femur. In the first place, we know that an injury has been received. — The limb is incapable of performing its usual motions.

The Surgeon grasps the leg & finds it capable of being unnaturally bent at the seat of fracture. He confines the superior fragment & rotates the inferior, the fractured extremities are rubbed together

and crepitation is both felt & heard. The problem is solved. It is a fractured femur.

Having shown the comparative ease or difficulty with which these two cases may be recognised, let us now examine the treatment, and ascertain, if possible, in what respect the knowledge of the surgeon is necessary in the first case, or that of the physician in the last.

The treatment of typhoid fever has been almost as various as the individuals who have treated it; or as the symptoms which have been present. — Some, and among this number is Dr Nathan Smith, whose opinion for authority stands second to none in america, considered all active treatment, especially in mild cases, to be injurious, that bloodletting should be practiced only

where there is great pain & heat in the head, and throbing in the arteries, or marks of congestion in the viscera of the thorax, that emetics are only admissible where there is nausea and oppression at the stomach, that the bowels should be kept open by gentle laxatives, & that the indiscriminate use of purgatives is very injurious. They would, in general, dispense with blisters & internal stimulants, also, with the mineral & vegetable refrigerants, considering the free use of cold water externally to be the most effectual refrigerant & febrifuge remedy. Uncovering the patient, they would have the surface sprinkled or dashed with pure cold water, giving him the same liquid for drink. — — — — Others, with Bouillaud, treated this, with other acute diseases, almost exclusively by copious and oft repeated abstractions of blood.

Others again, with De Sarrogue, treat the disease almost as exclusively by purgatives. But, whatever treatment be adopted, it is evident that the disease cannot be arrested or broken up. The most that we can do, is to assist it to a favorable termination. This we do by keeping the patient in a large room, free from all annoyances, giving him fresh air and cool drinks. If the febrile symptoms be high, we may practice moderate blood letting, say from 15 to 20 oz two or three times during the early part of the disease. If the patient be seen early, say first or second day, an emetic may be given with advantage. Gentle aperients to keep the bowels free, but when Diarrhoea comes on Opium is to be used. Drinks should be simple, if agreable to the patient, cold water is the best.

When the patient is convalescent, great care should be taken that he does not relapse, which is generally brought about by too long sitting up, or by a want of care in the diet. — When a perforation in the intestines occurs, it is not necessarily fatal, the bowels may be kept shut up, as it were, by large doses of Opium until adhesion has taken place.

In the treatment of fractures of the femur, the principal indications to be accomplished are, the restoring, and preserving by slight permanent extension, the natural position of the limb. — — To effect this with the least degree of suffering & inconvenience to the patient, many means have been resorted to & many apparatuses devised. Among the most important of which, are Potts, which consists of pillows placed

under the injured limb, the patient lying upon his side. As the position must be retained for several weeks, it would become intolerable, thereby rendering the apparatus of but little importance.

Sir Charles Bell's double inclined plane, being stationary to the bed, is objectionable, like all other fixed apparatuses, on account of the disposition which the body has to slide towards the foot of the bed, causing a loping of the two fragments by forcing one extremety by the other. The extension also being produced by force applied directly to the foot, caused great uneasiness and sometimes sluffing.

Dessault's apparatus also, consisting of a straight splint extending from the pelvis to below the foot on the outer side. By this means the limb is kept perfectly extended, traction being produced by

the mode of applying the bandage.

The objection to this, is. keeping the limb in a perfect state of extension, soon becomes very annoying to the patient. — With every motion of the body, also, the relative position of the limb is changed, and as there is but one Splint, an antero posterior displacement may occur, or the foot by its own gravity may distort the member.

These with (many others have been devised, all possessing advantages as well as disadvantages. ———

The one which is most perfect in accomplishing all the indications, is Dr Smith's, (which may be called an universal apparatus for all fractures of the leg as well as the thigh. It consists of a light frame of wood, connected & strengthened by hoops of iron on the underside, (with a joint fixed by a thumb

screw at the knee, & another at the ankle, permitting the leg to be flexed or extended upon the thigh, or the foot upon the leg. There is also a shoe attached to the lower extremity of the apparatus, by which the foot is sustained, partly by the heel, & partly by its plantar surface, so contrived that it may be raised or depressed, that the heel may receive more or less pressure. — The part of the apparatus ~~above the thigh~~ which is above the knee, is fitted to the thigh by stationary compresses covered by buckskin. — The part below the knee, is adapted to the leg by means of sling bands, suspended at each extremity by a single pivot, the length of any one of which bands (may at any moment be increased or diminished, if the pressure be unequal in any part, so that the limb may be uniformly

sustained throughout its whole extent. A Splint is adapted to the upper surface of the thigh, a compress being placed above the patella to prevent injurious pressure. it is then made secure by a strap which buckles around the limb. —— The leg is made permanent to the apparatus by a bandage, each turn of which, forming a new sling (which assists in supporting the leg) from below. A hip piece is also attached to the upper extremety of the apparatus, by which each motion of the body is communicated to the lower extremety.

A very important part of the treatment by this apparatus, consists in suspending it from the ceiling over the bed, by a single cord, which is attached by two hooks to each side of the frame work near its centre of

gravity. This arrangement, not only obviates all tendency to displacement of the fragments, & consequent shortning of the limb, by communicating to it, all, even the slightest motion of the body, but also, by a more or less obliquity of the cord, produces the necessary permanent extention, so that every indication is accomplisheed more perfectly by this apparatus, without any of the faults of the others. By this treatment with the appropriate constitutional treatment, a provisional tumor or callous soon forms, like a ferrule, around the bone, embracing, & sustaining in apposition the fractured extremities, until by bony deposit the shaft is reunited, when the callous is absorbed & the patient restored.

Thus we see from these two cases that the knowledge necessary in the one, is not indispensable in the other, & vice versa. These are extreme cases it is true, but the principle involved is the same in all. & how desirable so ever it would be for the perfection of the healing art, that these two branches be seperate and distinct, & each to receive its own votaries, still, from the present condition of society, especially in our own country, where the population is so sparse, & the number engaged in the profession comparatively so great, each one depending upon his own exertions for a livelihood, the accomplishment of so desirable an object, doubtless will be considered, especially by young practitioners, with whom the accomplishment lies, as a matter utterly impracticable.

AN
INAUGURAL DISSERTATION
ON
PNEUMONITIS,

SUBMITTED

TO

THE EXAMINATION

OF

THE PROVOST, REGENTS, AND

FACULTY OF PHYSIC

OF

THE UNIVERSITY OF MARYLAND,

FOR

The Degree of Doctor of Medicine

In the Session of 1844-5.

BY

Charles S. Baer,

of Frederick County, Maryland.

under ulcer, fine and delicate between the

A

INAUGURAL DISSERTATION

ON

PNEUMONITIS,

SUBMITTED

TO

THE EXAMINERS

OF THE

FACULTY OF PHYSIC

OF

THE UNIVERSITY OF EDINBURGH,

FOR

The Degree of Doctor of Medicine

In the Session of 1848-9.

BY

Edward Gibbons

of Shrewsbury, Shropshire.

To

Nathan R. Smith. Professor

of Surgery in the University of

Maryland, this thesis is most

respectfully dedicated, as a slight

testimony of the regard and esteem

of the author.

Cellular tissue, fine and delicate between the

Instrumentis.

Pneumonitis.

Pneumonitis, or inflammation of the Parenchyma of the lung, is a disease of great importance, both as regards its frequency and fatal Character in our climate.

It differs from the other diseases of the lungs in its seat, Anatomical Characters, General and physical signs.

Pneumonia, as the name implies, is seated in the tissue of the lung, the Parenchyma, a tissue composed entirely of the ramifications of the blood vessels, the minute divisions of the air tubes, each of which terminate in a small sac or vesicle, upon the parieties of which the small vessels are expanded, and cellular tissue, fine and delicate between the

Memoriis.

vesicles, but more abundant and dense around the large bronchi.

Pneumonia thus differs in its seat from Bronchitis and Pleuritis, the former being seated in the mucous membrane lining the bronchi, the latter in the serous membrane investing the lung, the Pleura. Both of these however may complicate pneumonia.

When we consider the functions of the lungs, the changes of the blood effected through their organs, a change so important to the welfare of the general economy, as regards the continuance of health, we must perceive, if we reflect but a moment, how important a healthy state of these organs must be, for the easy and complete performance of their functions, and how detrimental the opposite state.

The peculiar action of the air upon the blood is effected in the lungs, by almost immediate contact, the delicate membrane lining the cells, with the extremely thin parieties of the

minute blood vessels, alone intervening between the air and the blood.

When these membranes become inflamed, and consequently thickened, the air is separated from the blood by a thicker stratum of tissue; by this the free action of the air upon the blood is prevented, and the disagreable results depending upon a vitiated state of the circulating fluid follow.

It is therefore the sole object of the physician to allay the inflammation, and restore the membranes to their former delicate state, and by so doing remove the only obstacle to the free oxygination of the blood.

In the description of this disease, I have thought it best to follow the division laid down by Dr Eberhard, as it is preferable to any other. The Anatomical Character, Physical and general signs, diagnosis, prognosis and Treatment.

Anatomical Characters. — Pneumonia presents three distinct stages, first, second and third. These three stages follow one another in order the second the first, the third the second; the third never succeeding the first without the second appearing in its proper place.

These anatomical characters differ according to the stage of the inflammation. In the first stage the lung is engorged and infiltrated with blood and serum, presenting a mottled, livid red externally, and when incised the same livid hue, but the surface is smoother than the cut portion of a healthy lung. When thus incised, a red frothy serum is pressed out in considerable quantity. The lung is less yielding and softer than in the healthy state, but more friable, still not so much as in the second stage. There is generally some inflammation of the bronchial tubes leading to the diseased portion of the lung, containing a little white, frothy mucous.

The lung still crepitates and floats in water, owing to the small quantity of air contained in the vesicles.

Second stage, or state of red hepatization, so called from its resemblance to the incised surface of liver. The lung still presents the livid red externally, but internally is of a deeper red or purple. The tissue is more heavy, firm and dense, than in the first stage, sinks in water, being entirely destitute of air— more friable, breaking down under moderate pressure— of a granular appearance, depending on the inflamed and thickened vesicles, this is best seen when the tissue is torn.

The bronchitis is more extensive, and the mucous membrane more thickened and red than in the first stage— the bronchi contain a quantity of viscid mucous, of a brick-red colour, though sometimes purulent— The redness of the membrane

is most striking in the smaller divisions, they together with the larger are sometimes compressed and flattened, but still re-tain their calibre, this is owing to the effusion into the surrounding tissues, compressing the tubes. When the inflammation is seated near the surface the pleura is generally in-volved, and the disease becomes more pain-ful and still more grave.

In the large majority of cases the lung returns to its healthy state without passing into the third stage, or state of grey hepatization, or purulent infiltration.

The external surface of the lung in this stage is of a paler colour than in the second, and internally of a yellow colour, owing to the presence of pus, the lung being per-fectly saturated, just as a piece of sponge becomes saturated when placed in a vessel containing any liquid. When cut the puru-lent fluid oozes from the incised surface in

a large quantity— The granular appearance is lost and the lung breaks down under the slight pressure of the knife.

"The smaller tubes in this stage are completely obstructed, being filled with a purulent or muco-purulent fluid. The larger are still much thickened and swollen, and partially filled with this same fluid.

"This stage generally terminates the disease either by the death of the patient or passing back into the second— sometimes it ends in a circumscribed abcess of the lung, but this is extremely rare.

Physical Signs— "Here as the Anatomical Characters differ according to the several stages of the disease.

The sounds upon percussion are but little altered in the first stage. "The lung still contains a considerable quantity of air, but as it also contains an abnormal quantity of fluid, it is somewhat less resonant

than in the healthy state. When the disease is situated near the surface this is more perceptible, but when deeply seated the difference will be very slight.

In the second stage the sound upon percussion is dull and somewhat flat; especially when the inflammation is seated near the surface, and is extensive, but when more deeply seated the sound will not be so dull, — the dulness generally bounds the extent of the inflammation. This dulness will not be so apparent when the disease is deeply seated, because the air has still entrance to the cells external to the diseased part; but when it extends to the surface and the walls of the chest are thin, as upon the back, the sound will be dull and flat.

The sound in the third stage differs but little from that of the second, only somewhat more flat. But when the disease changes from the third to the second and begins to resume its

healthy functions, the dulness becomes less in-
-tense and gradually becomes as resonant as
natural, if the lung perfectly recovers its former
elasticity.

Respiration — In the First Stage there is
heard a crackling sound peculiar to the first stage
of Pneumonia - described as similar to rubbing
a lock of hair near the ear, the cracking of fine
salt when thrown on the fire, and to the squeezing
of Sponge cake - this is the dry crepitant rale or
rhoncus. Together with this may be heard an ob-
-scure bronchial or rude respiration - These signs
generally accompany or precede one another -
"The Rude Respiration generally precedes the
crepitant rale" (Gerhard) -

In most cases the crepitant-rale is better distin-
-guished, especially when the disease is near the
surface and in the lower lobe of the lung.

This rale may be said to be characteristic of
the first stage of Pneumonia alone. It is very
seldom heard in any other disease -

Oedema of the lung may produce it; but the nature of the case, together with the general signs will serve to distinguish it from the râle heard in this case, the crepitant râle of Oedema is generally moister and finer than that of Pneumonia - Emphysema may also produce it; but there will be almost always increased resonance upon percussion.

This râle is produced according to some authors by the bursting of the small bubbles of air in the vesicles, causing ~~the~~ a fine and sharper sound than in the smaller bronchi - Gerhard thinks that the dilitation of the dry, inflamed vesicles most probably produce it; and not the liquid contained in them - The spreading of this râle marks the progress of the inflammation.

In the Second Stage the crepitant râle is lost or only heard when the patient coughs or takes a full inspiration, and then the râle is small and scattered, a vesicle here and there expanding; in the first Stage the crepitations are very

numerous and correspond in number to the inflam-
-ed air cells.

Bronchial Respiration takes the place of this
sàle, and is heard in its greatest perfection about
the sixth or seventh day. (Bartlett)

It is not equally audible over the whole extent
of the diseased part, the larger Bronchi affor-
-ding the most perfect bronchial respiration—
The cause of this is, that the lung generally
becomes hepatized about the large bronchi before
the rest of the lung becomes affected, hence the
Bronchial Respiration is loudest at the base
of the lung—

When the tubes are small and the vesicles
very numerous, as in the lower lobe, the Bron-
-chial Respiration is less perfect.

Bronchial Respiration is one of the most
important physical signs of Pneumonia, it is
always formed long enough before death to be
recognised by auscultation—

This sound is most frequently accompanied

by Broncophony and increased resonance of the voice. Broncophony & Bronchial Respiration, is most intense at the root of the lung.

It is more distinct in this disease than any other, owing to the peculiar pathology of Pneumonia.

When Pneumonia is complicated with Pleuritis with effusion, this sound has a vibrating character.

In the third stage the Bronchial Respiration and Broncophony disappears in a greater or less degree, and are replaced by a loose, moist sub-crepitant rale, and mucous rhonchus, which varies in intensity and quantity as the fluid effused into the Bronchi be large or small.

The Broncophony is still heard feebly about the root of the lung, in most cases.

When the third stage ends in abcess the Broncophony is replaced by a loose mucous gurgling and cavernous Respiration.

The extent of gurgling is bounded by the size of the cavity and the extent of the

fluid in the neighbouring tubes, when this is large in quantity the gurgling extends farther than the limits of the cavity - This however is a rare termination of the disease -

After the cicatrization of an abcess the vesicular murmur returns in a degree, but always remains feeble and less expansive than in the healthy state.

As a large majority of cases go no farther than the second stage these sounds are seldom heard.

In the second stage when the disease begins to yield and the lung again becomes pervious to air, a loose crepitant or sub-crepitant rale makes its appearance. The return of the crepitant rale is a favourable sign, it shows the return of the disease to the first stage, subsidence of the inflammation and commencement of convalescence it has for this reason been styled the crepitant rale of recovery -

The Bronchial respiration becomes less, and is heard only at the root of the lung, and

finally disappears altogether. The dulness in the same manner becomes less and the lung recovers its elasticity and sonoridy. When the disease has progressed as far as the ~~third~~ stage, the crepitant rále is not reproduced, but the mucous rále is replaced by a weak respiratory murmur.

Expectoration. In the first stage the ex-pectoration consists of a transparent, tenacious mucous, similar to the natural secretion of the Bronchial tubes, small in quantity, generally about from two to four ounces in the twenty four hours. As the disease advances the ex-pectoration becomes more tenacious, and flows less easily from the vessel. The small quan-tity, extreme tenacity and piscidity are charac-teristic of Pneumonia in the First stage.

When the disease passes into the second stage the sputa changes also, from the transparent to a reddish-brown, caused by the presence of a small quantity of blood intimately mixed

with the sputa, this constitutes the brick-red sputa of the second stage of Pneumonia. The sputa is still small in quantity, retaining its tenacity and viscidity, and runs together in the bottom of the vessel containing no bubbles of air, which distinguishes it from the sputa of bronchitis. In that disease, the sputa is less tenacious, more frothy and abundant, and never possesses the brick-red colour. When the inflammation passes back to the first stage, the sputa becomes more abundant, less tenacious and more of the character of pus, more easily expectorated, not adhering to the bronchi so closely. But when it passes from the second into the third stage, the sputa either becomes purulent, or muco-purulent, of a yellowish or prune juice colour, the latter is a more unfavourable symptom, but comparatively rare.

The expectoration in this stage is more copious, than in either of the preceding.

When recovery takes place, the sputa does not change as the sounds do, to the different stages, but gradually decreases in quantity and becomes more transparent, as in the first stage. It is highly important to be well acquainted with the appearance of the sputa in the several stages of Pneumonia, as it may be the most important symptom present, and often sufficient to reveal the character of the disease.

The pain in pneumonia is slight, except when pleuritis is a complication, and then the pain assumes the peculiar character of the pleuritic stick. But when this complication is not present, it is of a dull and heavy nature, and when the inflammation is deeply seated, it is rather a sensation of weight in the region of the chest, than pain.

The frequency of the Respiration is an important symptom, often showing the extent and severity of the disease, by the labour and

difficulty experienced in performing that function. When the inflammation is extensive, the respiration is often increased from twenty to sixty in a minute in adults, and as high a 70 in children. When the respiration is very frequent and laborious, the prognosis is more unfavourable, it points out the severity and extent of the inflammation. It is generally performed by the diaphragm alone, the ribs remaining quiescent.

The cough is dry, short and distressing in the first stage, but more loose in the second, and the sputa passing into the third, or the third passing into resolution. (Gerhard)

The patient lies upon his back in this disease, as in all others of a prostrating nature. There is also a inability to lie on the affected side, and a tendency to slide towards the foot of the bed, in most cases, especially those of a typhoid type.

General Symptoms. Pneumonia generally

begins with a chile, lasting from half an hour to an hour, generally repeated, followed by general febrile action,- face flushed, the suffusion being deeper on the cheek of the affected side, and more flushed at some period of the day than at others,- Pulse various, from 90 to 120- not so hard as the pulse in Pleurisis, but somewhat soft and full- When as high as 120 or 130 more unfavourable- febrile action higher at some period of the day, synchronous with the increased suffusion of the cheek- Respiration frequent, hurried and laborious,- perspiration free about the head, neck and shoulders- mind clear, no delirium, except in fatal cases- loss of appetite- thirst- tongue covered with a light coloured coat,- dry- sordes about the teeth, tongue and gums towards the termination of fatal cases- bowels generally constipated,- sometimes diarrhoea- blood cupped and buffy-

In the third stage the face is pallid and sunken, expression anxious, great debility, pulse weak but frequent, mucous gurgling in the trachea in cases much debilitated.

The diagnosis is sufficiently easy- Since the discovery of Auscultation the physical signs added to the general symptoms, make the diagnosis of this disease the most certain of all internal acute diseases.

Although the disease may be small in extent and deeply seated, still the presence of a few crepitations or Bronchial Respiration, will at once point out its nature and seat.

We should therefore hail auscultation as one of the greatest discoveries of ancient or modern medicine.

The Prognosis is favourable, when the patients constitution is good, habits regular and the physical signs not showing great intensity of disease, but small in extent and in the first stage- there being no very great febrile action, the pulse ranging from 90 to 100-

But when the patients constitution is broken down by the habitual and excessive use of alcoholic drinks, syphilitic taint, or any other deteriorating cause - the pulse above 110 - the strength exhausted - the evidence of extensive disease being present - the Respiration very frequent and laborious - the cough distressing - the sputa small, and difficult to be expectorated, the Prognosis is unfavourable -

Age, also, has great weight in the formation of our prognosis - When the patient is under three years, the prognosis is unfavourable, as this is a very fatal disease among children, but when above that age, it is more favourable, and when it occurs in persons far advanced in life it again becomes unfavourable.

The true idiopathic pneumonia of Adults never occurs in children under six years. The pneumonia as it occurs in children of this age differs in the form of the inflammation, it is lobular, the small lobules of the lungs be-

coming inflamed and indurated at a distance from one another, and gradually extending involves other lobules throughout the entire lung, until the whole lung or one of the lobes, becomes diseased.

The pneumonia of adults, differs from this as it is more extensive and diffused, and the parts affected are extensively diseased from the beginning, a single lobe or the entire lung being implicated.

The pneumonia of old persons is ~~of a~~ more of a typhoid character, a great amount of prostration accompanies it from the very onset, for this reason it is more fatal among aged persons than those in the middle of life, the constitution being worn out, and not being able to bear up against the depressing effects of the inflammation.

We may have this typhoid state in young persons, whose constitutions have been broken down by excessive dissipation.

The complications of pneumonia are usually of a serious nature. Bronchitis, pleuritis, endo and pericarditis, are frequently consequent upon, and complicate acute pneumonia.

Bronchitis is always present in pneumonia, and sometimes of such an acute and extensive character, that it entirely masks the physical signs of the latter.

The pleura is frequently complicated, especially when the inflammation is seated superficially, but when more deeply seated it is less apt to occur. When the pleuritis is extensive, and the effusion large, the pneumonia may be obscured, especially when it is in the first stage, but when in the second, the bronchial respiration will still be heard, of a vibrating nature, owing to the effusion which gives the peculiar bleating character to the voice in pleuritis.

Pericarditis and endocarditis are not such frequent complications of pneumonia, as either

pleurisy or bronchites, but both or either may be serious complications.

Pneumonia itself is frequently consequent upon phthisis, owing to the inflammation caused by the softening and ulcerations of the tuberculous masses, it is sometimes consequent upon emphysema, but not so often.

Treatment. The treatment of pneumonia in a manner depends entirely on circumstances. The stage of the inflammation, the constitution and previous habits of the patient, state of the pulse, extent and severity of the disease, and the complications, all, to some extent, assist in modifying the treatment.

These great remidies divide the profession in the treatment of pneumonia, Calomel, the lancet and Antimony - all very powerful and efficacious remidies, so much so, that it would be extremely difficult to make choice of one to the exclusion of the others.

The Tart-Ant et Potass. is however considered the most efficacious. (Bartlett.)

They will prove more beneficial when combined than when used ~~[illegible]~~ seperately.

When the patients constitution is good, this former habits temperate and regular, the pulse full and strong, the disease in the first stage and much febrile excitement, blood may be taken from the arm in a full stream, until some effect has been produced upon the pulse, never so far as to produce syncope, as the lungs in that state become more congested, but only until the pulse flags, and the patient feels some nausea. This should be repeated again and again if necessary, cups also may be used. Small doses of Calomel and Ant should be given, frequently repeated, - perfect rest to be enjoined, - the diet light - mucilaginous drinks, and if the bowels be constipated, a mild cathartic may be given, not of a very active

character, but just sufficient to keep them in a soluble state, and when Diarrhoea is present and likely to weaken the patient by frequent and exhausting evacuations, a little opium may be conjoined with the Calomel and Antimony, in order to check these unnecessary and debilitating discharges.

Blisters have been highly recommended in Pneumonia, there is no doubt of their efficacy, but they should not be used in the acute stage of this disease, but rather reserved until the inflammation has become more of a chronic form. (Bartlett.) They should therefore be used in the second stage, or still later.

In the second stage the patient cannot generally bear general depletion so well, but cups may be applied over the diseased part with more advantage. The Calomel and Antimony are to be continued, until the peculiar effect of the mercury upon the system

is produced, to be effected by both the internal and external use, the Ung. Hydrargyrum may be rubbed in the groins and axilla, or by dressing a blistered surface with the ointment. In the third stage the treatment must be more stimulant and sustaining, a generous diet, rich soups and other nutricious articles of diet, wine & cordials, of a tonic and invigorating nature are the best. The patients strength to be sustained by every possible and plausible means. The apartment to be kept at a pleasant temperature, neither too warm or cold, but at such as is most pleasant to the patient.

Typhoid Pneumonia is to be treated similar to the third stage of acute pneumonia, as stimulant and tonic treatment from the start.—

An

Inaugural Dissertation

On

Syphilis.

Submitted to the examination

of the

Provost, Regents

and

Faculty of Physic

of the

University of Maryland

For the

Degree of Doctor of Medicine

By

Ashton Alexandre Marshall

of

Virginia

Baltimore March

1845.

To Ashton Thruston M. D.

Provost of the University of Maryland

My dear Sir

In the double character of relation and friend, You have a claim upon my esteem, and affec=tion, I experience much more pleasure, in thus, tendering You, my sincere acknowledgements, for the friendship, and instruction, received, whilst, engaged in my studies, than You can feel, in accepting them, Long, and uniformly, accus=tomed, to the performance of kind and benev=olent actions, hostile to all vanity and ostentation, Your unaffected modesty, leads You ever, to avoid all appearance of flattery and compliment,

That Your valuable life, dedicated, to the service of Your fellow citizens, may be long, ex tended, that every happiness may await You now, and hereafter, is the sincere prayer of,

Your affectionate relative and pupil,

The Author

To

Nathan R. Smith. M. D.

Professor of Surgery

And to

Elisha Bartlett. M. D.

Professor of Theory and Practice

In the

University of Maryland,

This Essay is most respectfully

Inscribed

As a testimony of the

Esteem and respect

in which they are held

By the

Author.

Syphilis

It has been supposed, that this Disease, was well Known, even as far back, as the time of Moses, and that it was one of the ills affecting Job.

The supporters of the Antiquity of Syphilis, adduce passages, in Bible, they bring forward a host of Ancient Medical and poetical Authors, to prove that this Disease was of Ancient Origin.

Others, say, that this, as well as all other diseases, existed with the birth of Man, I think these opinions have equal respectability.

Those ancient Authors, brought forward in evidence, certainly mention various ulcers, breaches of surface, eruptive Diseases, but natural it is, that, this, should have

happened, amongst the various nations, of these different writers, when, we remember their debaucheries, sexual indulgencies, and luxurious modes of life, Nothing that they say, however, can be construed, into a similarity, with the lamentable consequences, attending the first Invasion of Syphilis. I may also mention the evidence, which they bring forward, so lately, as, the fourteenth century, the writers of that day, and the ordinances of Bishop of Winchester Stews, also of Joan, Queen, of the two Sicilies; But all they say, only proves, the Disease then existing, to have been nothing more, than Gonorrhea.

How can we reconcile their Opinion, with facts which happen afterwards,

Towards the close of the fifteenth Century, the Public, suddenly, becomes the victim, of a new, and unheard of Disease; Not attacking the poor, alone,

Who were deprived of the means of cure,
but exhibiting, all its rage, its Malign
Influence, and baneful power, upon princes
Cardinals, Dignitaries of State, and the
highest of both sexes. Not only incurable
by any treatment, then Known, but showing
its severity, Sudden appearance, and novelty.

Evidence, can be drawn, also
from writers of that day, particularly
Peter Martyr, physician to Ferdinand
and Isabella, and Baptist Fulgocius
that it first appeared, between the years
fourteen hundred and eighty four and ninety.

And here, let me say, that this disproves
the opinion, that Columbus, imported it
from the western Continents, As he return-
ed from his voyage of discovery in
March 1493. And the disease was well
Known for nearly eight years before
having been spread over nearly the
whole of Europe, by the forces

Collected, at the Siege and capture of Naples.

It must have spread very rapidly indeed, for in the year 1497, it had become so pe= =rious an evil in Paris, that all persons, not actual residents in the city, were ordered off, on pain of death, whenever they should catch the disease, And also in Scotland, Jas. the 4th banished all persons, having the disease, from Edinburgh to the island of Inch Keith.

Where the Disease did originate, is a ques= =tion, not easily, answered. In fact, it is not a question of practical im= portance, to practitioners of the present day, yet as a matter of literary research, Sydenham

thought it worthy of his notice, it attracted the attention of Swediaur, Sprengel, and other eminent writers.

When this Disease first broke out, it was deemed, highly Contagious, so much so, it was, one of the accusations, against, Cardinal Wolsey, that he being, affected, had whispered in the Kings ear.

And, Also, I suppose, to shelter the dignified persons, numbered in the ranks of its supporters, it was attributed to a kiss, a touch, even breathing the same atmosphere;

That the disease, was orig= =inally, more rapid in its march, and more severe in

its consequences, can more readily be believed, from the description handed down to us, probably from the want of proper treatment then, and that having been combatted, for so long a time, it has assumed a milder form; however, they all in their writings mention the true cause of its attack,

Very little must have been known of the pathology of this disease; we hear, that an ulcer, was produced, in a remarkable manner, "accessionem muliris supra hominum", and that a woman was cured by leaping backwards, down stairs,

There is one circumstance, respecting the contagion of this disease, noticed formerly, and can be observed at present, which cannot be explained, that, of

half a dozen persons equally deserving it, one or more may escape contagion.

Primary Syphilis, commences with chancre, beginning with slight redness or inflammation, on some part of the genital organs; this is attended with pruritus or itching.

This itching is soon changed to pain, and a pimple is formed, in a short time, filled with pus, which upon bursting, leaves an excavated ulcer, of a circular shape, with hard and abrupt edges, the surface being coated with matter, the base of the ulcer is thickened and hardened.

This is the appearance of chancre, when situated on the glans penis.

When the prepuce, or foramen, is affected, the inflammation is higher, the pain greater, and the chancre, often follows directly, a slight excoriation

of the surface. When seated on the common skin of the penis, the matter soon dries, and forms a scab, which drops off and leaves another of larger size.

Perhaps the most characteristic mark of primary syphilitic ulceration, is the indurated base, and while this exists, though the sore may have healed, no doubt the disease remains

Chancres may appear on any part of the body, but they happen more readily on mucous membrane, than on the common skin. When situated on the penis, they are usually on the praeputium, behind the corona glandis, or on the internal surface of the prepuce, and also in the mouth of the urethra,

In females, the labia, the nymphae, and the entrance of the vagina, are usually attacked, though they

they have them in other parts.

Sometimes, chancres appear on the eyelids, lips, and nostrils, the matter being applied by the fingers.

The period at which chancre follows, the application of the virus, is very uncertain, So long as the chancre is confined to the spot it occupies, the disease must be considered local,

If not arrested, the virus extends to the systems, through the absorbents, and gives rise to secondary symptoms, the first sign of this, is the enlargement of the glands in the neighbourhood of the sore, this is called bubo,

As chancre usually occupies some part of the penis, the glands in the groin are attacked, the deep seated or remote glands not enlarging.

A Bubo does not always follow chancre, though the system is not the

less liable to suppur.

Bubo, does not generally follow a chronic chancre, but makes its appearance, soon after the chancre, it is more apt to follow, one, seated on the prepuce, or fraenum, than on the glans penis.

It often remains stationary, for some time, though generally it is, of a bright scarlet colour, very painful, and runs rapidly into suppuration; the ulceration is like that of chancre, and the matter is equally infectious.

The bottom of the ulcer, is hard and solid to the touch, the surface, is of a dark red, or brownish colour; very extensive ulcerations sometimes follow a bubo.

The secondary, or constitutional, symptoms, of Syphilis show themselves under various forms, and generally appear in regular succession.

The parts, first attached, are the nose mouth, and skin, also the tongue, and throat; And next to these, the periosteum, fasciae, tendons, bones, ligaments, eyes and ears; frequently the skin, is the part first affected, but the throat most commonly, shows the first symptoms of the absorption of the virus. It appears in the form of ulceration, and occupies the tonsils.

The ulcer is covered with an ash-coloured, brownish matter, giving it an unhealthy appearance, while the surrounding parts are slightly inflamed, and of a copper colour. As the ulceration advances, one or both tonsils, the uvula, velum palati, part of the eustachian tube, and even the epiglottes, may be destroyed, again the disease may advance along the Schneiderian membrane, And undermining

the septum, and cartilaginous, part of the nose, destroy the periosteum, covering the delicate bones which soon become carious, and crumble away.

The parts occupied by Venereal eruptions or blotches, are back of the neck, forehead, breast and groin. Generally the skin becomes discoloured, or mottled, covered by an efflorescence, which is preceded by general indisposition, such as fever, restlessness, headache, —

The periosteum and bones are next affected, principally those thinly covered, the cranium, ulna radius, clavicle, sternum, tibia; this is shown by an enlargement, called a node, this increases slowly, and is not painful unless it has continued a long time when deep seated and acute pain is felt, particularly when the

patients is warm in bed, the integuments having become red and inflamed.

After a time the swelling becomes soft, and fluctuating, ulceration takes place, a communication is opened with the interior, and an ill conditioned, flaky matter is discharged.

All secondary symptoms, are preceded, or accompanied by more or less constitutional derangement, the fever is either periodical or continued and may assume the hectic form.

Secondary symptoms are distinguished from primary, in not communicating a specific or contagious disease similar to that arising from chancre or bubo.

Besides those affections mentioned, they also have venereal warts, condylomatous tumours, falling off, of the hair, and

Britis, they also have Ischury and Stricture, which Swediaur, describes as being different.

In the early ages, mercury was known to the Arabians, and applied by them, to the cure of cutaneous affections

Probably by analogy, it was employed in syphilis, when this disease, first appeared, for Grunpeck mentions it as early as 1496 in connection with the complaint. His receipe contained many useless ingredients, with about a fifteenth part of Quicksilver.

The employment of this remedy, that is mercury, was soon abandoned, or used only by empiricks.

The want of skill, shown by the medical men of that day, their ignorance, of its powerful action, of its accumulative quality, and of its, occasionally, capricious action, must have led, to

many unhappy results; Their idea that the virus was expelled by the mouth, caused them to carry, salivation, to a great extent.

Finding, all common modes of cure, unsuccessful, and learning, from experience, the baneful consequences of a rash employment of mercury, they were anxious for any remedy; such was supposed, to have been found in the West Indies, where it was called Guaicum or Huaicum wood, and was introduced, into Europe in 1508.

This soon gave place to China root, and Sarsaparilla, the first of these roots was soon abandoned. I might have mentioned, that when the Guaicum was in use, it was customary for those affected, and could afford it, to take a voyage, to the West Indies, and place themselves under the care

of the old Indian woman, It was also customary to combine all three of the roots, In the latter part of the 16th Century, there was difference of opinion concerning the use of the vegetables or mercury. Fallopius spoke of the use of mercury, as "omnium curationum acerbissimum", and of Sarsaparilla as the "vera regia".

In the beginning of the 17th century mercury began to be generally recommended, with inunction; they had improved very much, in the composition of their ointments.

The practice of inunction employed by Sydenham, was a very formidable process, the salivation being brought to a flow of about two quarts a day—

Wiseman's was still more severe, lasting from twenty to thirty days.

I do not pretend to enter into the Question of the mercurial or non mercurial

treatment, but I believe, that, from statistic
trials in the British and American Armies
and hospitals, it has been decided, that the
primary syphilitic sore, may be cured sooner,
without Mercury, than with it; this state=
=ment, being made by the advocates of the
non-mercurial system, whilst, at the
same time, they confess the advantage
of its use, in cases, that prove obstinate
or incurable unless it be employed.

As to the secondary symptoms, after
the removal of primary sores, such, are
most common, after the non mercurial
plan, whilst the severe affections of the
bones, - nodes, caries, hardly ever follow
this treatment, and that the secon=
dary symptoms are more easily cured.

As chancre in its commencement
is a local disease, local remedies
must be employed. Unless, the inflam.

=mation is very high, it is best to touch the sore, with lunar caustic, or caustic potash, these convert it into, as simple, ulcer, which heals, without contaminating the system.

If the chancre has been present for some time, the sore will be made worse by this application, the virus having extended beyond the part. It is then necessary, to use internal remedies, and of these, mercury, is the best, either, in the form of calomel, or, blue mass, the muriate is better in the secondary forms; calomel may be given alone, in the dose of a grain, night, and, morning, or in combination with opium, mercury may also be used in the form of ointment, if pimples, or ulcerations, arise of course it must be discontinued immediately, In some cases, it may be desirable to produce gentle ptyalism, but this rule must be borne in mind, that with

some persons, it is difficult, to produce salivation, although, the mercury may still, be acting on the system, in such cases, great injury may be done to the patients constitution, As local applications, the black wash, or when the sore requires to be stimulated, the yellow wash may be used. Camphor and Dulcamarra are useful, in preventing erections, if they prove troublesome in spreading the chancre.

To prevent Bubo from running into suppuration, Antiphlogistic treatment must be employed, blood letting, purgatives. low diet, and the system may also be put under the influence of mercury, Cold Saturnine, solutions, applied to the part,

If suppuration is inevitable, warm poultices, must be applied, and it must be lanced, if it is backward, in its approach to the surface,

The treatment of the secondary forms, depends upon their extent, mercury is not always necessary

when it is, it is best to be used in the form of the muriate thirty or forty drops of a solution of, one grain, to an ounce and a half of water may be given, two or three times per diem. Sarsaparilla, Guaiacum, Mezereon, and the nitro muriatic Acid, are given in the secondary forms.

I take leave of this well worn subject, well worn, for how many hundreds of Essays and books have been written on it, I certainly, did not expect to add anything new, and it has been too voluminously treated, for me to put down but the merest practice; All that I could do, was to call the most important points that I have read and heard of

An intelligent & well written Dissertation
WC

An
Inaugural Thesis
on
"The influence of the Mind, in the production, and cure of Disease"
Submitted to the examination
of the
Provosts, Regents, and Faculty of Physic
of the
University of Maryland
for the
Degree of
Doctor of Medicine
by
Alexander Robinson,
of Virginia

February 4th 1845.

Balt. Alms House

As a candidate for the degree of M. D. the undersigned respectfully submits to the Faculty of Physic the following observations on the Influence of the Mind on Disease.

That the immaterial thinking principle operates in a powerful though mysterious way upon the physical system in a state of health, scarcely needs illustration. Its action is palpable to the senses, whether we regard the functions of animal, or those of organic life. It is strikingly exhibited in the phenomena of voluntary motion, in the palpitations of the heart occasioned by mental emotions of an agitating character, and under similar moral circumstances, in the increased activity of certain secretory organs, such as the lachrymal glands. These examples are commonplace and familiar to the eye of every observer. They indicate not only the existence of the alleged power, but its extension even to the molecular actions over which the mind has no direct control. It is our business to detail some of the most usual circumstances under which this principle operates in the production or the cure of various diseases. And, since the relation between the condition of the mind and that of the bodily organs is so constant, so general, so intimate,

and so manifest, is it not reasonable to infer that mental impressions of an irregular character of undue length and violence may excite, not mere temporary disturbance, but permanent structural change, in other words, organic disease as well as functional derangements. Accordingly, such is found to be the case. It has long been regarded as an established fact in aetiology and upon it important hygienic rules have been founded. Not to go further back nor to seek higher authority upon a point of of history, Burton, in his "Anatomy of Melancholy," evinces the universality of the belief that depressing passions are capable of inducing bodily disorders. The mortific influence of certain moods and dispositions has been so generally recognised that the fact is often proverbially expressed. Unlike most popular notions upon medical subjects this opinion is fully substantiated by the first professional authorities, both ancient and modern. We have thus the surest warrant for the assertion, that certain mental conditions may develop, if not originate, "distinct, circumscribed, organic disease".

The "modus operandi" of this unseen agent, whether it be acting for good or for evil, we are equally unable to explain. We know but little of the mind individually; still less do we understand the nature of it's connection with the body. But of their reciprocal influence we have convincing and intelligible evidence. We cannot fail to observe the effects of a mutual sympathy, at all times quick & powerful, but occasionally exhibiting unusual energy. It is our task to notice particularly the workings of this principle, as an active predisposing and exciting cause of disease, in one case, and as a useful and available Therapeutic agent in another.

Moral causes operate extensively in an <u>indirect</u> way. Thus, extreme unhappiness or engrossing passions often give rise to ill health by inducing loss of appetite and rest, irregularity of habits in regard to diet, neglect of personal comfort of exercise and of other hygienic means, but most frequently by impelling men to resort to opiates and alcoholic stimulants. This indirect influence is vast, but

of it we do not propose to treat. The moral and intellectual part of our constitution, when the natural harmony of it's functions is interrupted, affects it's corporeal tenement, independently of external agencies, predisposing it to disease, augmenting it's susceptibility to morbific impressions, and sometimes proving in itself an adequate cause of mortality. We do not require the sentimentalist to tell us how disappointed love, ungratified ambition, remorse of conscience and harassing cares prey upon the health and strength of their victim. We need not call upon Fancy for the spectacle of an upright man, oppressed with a melancholy, which withers his energy and undermines his constitution, though he sincerely and intelligently endeavour to prolong the life which heaven conferred. Nor is every story of a broken heart a fiction of the imagination. Instances of death from no other cause than mental affliction, actually occur. In some cases the shock of calamity proves instantaneously fatal; in others, there results a gradual wasting of the powers of life even when all externals conduce to recovery. In such cases, the curative art

is almost powerless. The physician can accomplish more as a moralist and a christian than as a medical man. We advance the facts chiefly to show the almost unlimited power of the "morale" over the "physique".

Perhaps no one doubts the general statement that acute and prolonged distress, or excessive excitement or depression of mind will throw the system at large into such a state that it will be less able to resist the ordinary causes of disease. It has been stated, I know not with what degree of correctness, that persons afflicted with insanity are remarkably free from other affections. If this be true and does not depend upon their being usually protected from the most fruitful source of sickness, it can easily be explained upon the acknowledged principle, that when there is one point of decided irritation in the system, another of a different character is not apt to be established; in other words, that when one series of morbid actions is progressing, another is not readily introduced. In active insanity the concentration or rather augmentation of vital properties in the brain and it's meninges, may, by

acting as a derivitive and revulsive, sometimes prevent the developement of inflammation in distant organs. This explanation conflicts no more with the theory of sympathetic irritation than the fact it explains does with the doctrine under consideration. The same individual, in whom permanent mental hallucination might be perfectly compatible with general good health, might, if sane, be worn down by the cares of reality. Moreover, chronic insanity itself is a compound disease of the mind and the brain, generally brought on by abnormal excitement of the former. Consequently, it affords a positive instance of mental exercises lighting up local organic disease. Thus it is plain that the protective power of insanity, even if it exists, does not invalidate the general proposition enunciated at the head of this paragraph. The view therein presented is so fully substantiated by every day's observation that we need spend but few words in its elucidation. We will only mention several cases for illustration, suppositions indeed, but types of those which really & repeatedly occur.

A woman of sensitive nature meets with some heavy domestic misfortune which weighs down her spirits, shatters her nervous system, impairs all the powers of life and actually diminishes the vital properties of the tissues of the body. In this situation, from some slight exposure which to another would have been harmless, she contracts a cold, formerly a matter of little consequence. Now, instead of yielding to the usual remedies, it becomes an obstinate bronchitis, which, by prompting a tuberculous deposition, leads on to phthisis with all it's attendant horrors. All this may occur in the person of one, who, but for the augmented sensibility of a constitution debilitated by mental anxiety, would have resisted the catarrh, prevented the bronchitis and escaped the consumption. —— A child of precocious intellect, with quick perceptions and ever-active mind, is seized with an ordinary fever. Instead of yielding to simple treatment, it becomes complicated with inflammation of the brain and death is the result. Such is the frequent but unheeded warning given to those who so injudiciously urge the youthful intellect.—

Again; a timid person, whose apprehensions of evil are very strong, exposes himself during the prevalence of a epidemic to some source of contagion and is soon after seized with the malady of which he was so inordinately afraid; while a bold or thoughtless individual escapes uncontaminated. Hence the comparative security with which the courageous physician performs the duties of his profession in the very atmosphere of infection.

Many other illustrations of the same kind might be given; these, however, will suffice to demonstrate the principle that undue excitement of the passions, excessive exertion of the intellectual faculties and depressing emotions of long continuance may facilitate the injurious action of physical agents by throwing the system into a condition favourable to their operation. But moral influences prove less frequently a predisposing, than an exciting cause of disease. The same class of emotions, the same intellectual habits which, under certain circumstances, would merly give efficacy to external morbid impressions and thus be <u>accessory</u> to the inroads of disease, must in other cases be considered as the

actual excitants of the attack. It is thus that constitutional affections are often developed to which there existed a predisposition, hereditary or accidental, but which might otherwise have lain dormant in the system during a long and healthful life. Many an individual liable to phthisis from congenital conformation might yet have parried its attack but for the deleterious effect of habitual melancholy or severe and prolonged distress of mind. Akin to this is the fact that maternal anxiety sometimes converts a slight scratch of the skin into an open cancer. The abrupt communication of bad news often brings on watchfulness, fever and delirium, which, in their course, may acquire serious local complications. It is ascertained that the horrors of the French revolution greatly multiplied the instances of apoplexy. The following case sometimes occurs. A man of irascible disposition and plethoric habit is indisposed from some temporary disturbance of the circulation, in itself unimportant. But the cerebral excitement of a paroxysm of anger is sufficient to produce a determination of blood to the head and a fatal congestion of the brain. The celebrated John Hunter fell a

victim to an apoplectic seizure, to which he was predisposed from ~~disease of~~ the disease of the heart, but which was undoubtedly brought on by the effect upon his feelings of an insulting personality in debate. He is said to have predicted for himself such a fate, which unfortunately the liberties of public discussion and his own refined sensibilities consummated.

In further illustration of our subject we may refer to the danger which attaches to surgical operations when excessive fear agitates the patient. The Prof. of surgery relates the case of a Lady who perished from this cause upon the removal of a superficial tumour from the head. Her apprehensions of death amounted to an absolute conviction of the certainty of it's approach, and, but too truly, the moment the first incision was made she began to sink and died without reaction in two hours. Such an event impresses the propriety of consulting the feelings and views of the patient before venturing upon the use of the knife — a course dictated by humanity and reason, and by a desire to avoid unjust blame in the surgeon.

Hysteria is one of those affections which frequently owes it's accession, if not it's origin to moral causes. The same may be said of many other nervous diseases. Women of delicate organization and acute sensibility sometimes have their nervous systems so prostrated and deranged by the stroke of domestic calamity, that they become subject to a variety of anomalous symptoms incapacitating them for the duties of life. They are liable to successive attacks of syncope or spasms upon the lightest mental agitation or bodily indisposition. They constantly suffer from headache, neuralgia, loss of sleep and appetite, disorder of the digestive organs, emaciation, morbid sensations, till at last they become victims to confirmed dyspepsia, epilepsy, insanity or some other chronic affection. These and a thousand other maladies follow in the track of misfortune and attend the culpable abuse of those senses & faculties over which we may and ought to exercise a rational control. To many of those enumerated and to many not particularized the state of the mind bears the relation of sole cause. It acts in these cases independently of external agents and of constitu-

tional peculiarity; except in so far as they may determine what particular affection shall result. In other words the malign influence of certain conditions of the mind is in itself sufficient to to induce serious and troublesome disease. To give a prominent instance, such is commonly the case in insanity. This is not so surprising. The brain is the immediate organ of the mind; its circulation is accelerated by the exercise of thought, and its physical changes modify to a great extent the moral and intellectual manifestations. We can, therefore, readily imagine that mental disturbace may precede and occasion cerebral disease, and also that disease of the brain may give rise to idiocy or mania. Such is in general terms the true pathology of insanity. Nor is this view inconsistent with the fact that in many cases of insanity no abnormal appearances are found within the cranium, and that instances of organic alteration of the brain occur without being attended with any observable impairment of the mental powers. Because these reciprocal actions are not always apparent we cannot disregard the reality of their frequent occurrence. It is indubitable

that causes operating exclusively upon the mind may destroy it's ability to perceive and reason with correctness. It is equally unquestionable that this perversion intellect may, unless removed, generate disease of the brain and it's meninges, which will in turn react upon the original disorder, rendering it more violent and less curable. Upon the recognition of these facts depend those principles of treatment for the cure of insanity which guided the enlightened Philanthropy of modern times to signal and unexpected success.

With a few additional observations we will conclude this division of our subject. We wish among other things to remark the intimate sympathy which subsists between the mind and the uterus. How promptly are disturbances of the one responded to in the other! How often, for example, is the menstrual function interrupted by agitating emotions! How frequently is abortion produced by fright or sudden and violent grief! — The truth of these suggestions and the important practical bearing which they possess will be recognized without a comment.

We can but mention the effect of certain moral causes in aggravating existing diseases and retarding convalescence. This influence is perhaps more common than any we have alluded to, yet we must dismiss the topic with but a single case in point. Sir Astley Cooper relates the history of a chronic ulcer which was several times brought to a healing state, but was as often thrown back to it's original condition by the exposure of the patient to sources of great mental irritation. He was, therefore, directed to take an apartment distant from the causes of angry excitement. This being effected, he recovered without varying his treatment.

The imagination exerts over some such unbounded sway, that when at all unwell they are led to suppose themselves a thousand-fold worse than they really are. Persons of this character sometimes fancy themselves to be labouring under diseases from which they are entirely free. The delusion is confirmed by the circumstance that complete concentration of the attention to any organ is capable of affecting it's sensations and the circulation and innervation of the part. In such cases the physician should

first endeavour to reason the patient into health; should he fail in that, recourse may be had to some innocent placebo. It is from such persons that the quack reaps his richest and easiest harvest.

As a final addition to these miscellaneous proofs of the efficacy of moral causes in producing disease, we may adduce the singular epidemic which prevailed in Penn., Md., and Va. about the year 1804. It consisted of involuntary jerkings of the limbs and head, with a variety of symptoms in different individuals. But the point of interest at present is the fact that it was usually brought on by religious excitement. In the same way is sometimes produced the cataleptic condition commonly denominated "trance;" and by means not essentially different are created the phenomena of Animal magnetism. It is not necessary to pause for the purpose of showing the bearing which these facts have upon the subject under consideration. They plainly tend to support the proposition which all the preceding observations have been designed to establish and elucidate. We have

thereby endeavoured to prove that certain conditions of the mind may act as the predisposing, the exciting, or the unassisted causes of bodily disease. We have also referred to imaginary diseases and to the effect of mental influence in aggravating real affections and hindering the progress of cure. The "modus operandi" of the spiritual upon the corporeal, we leave to the fruitless speculations of metaphysicians and transcendentalists. We only remark upon this point that the first in the series of morbid actions perceptible to us is a disturbance of the general circulation and innervation, the evil effects of which are localized (if at all), 1st in those organs which are already deranged; 2nd" in those which are prone to disease at the time, or 3rd", in those which sympathize most intimately with the mind.

We proceed now to the general and rapid view, which our limits permit, of the influence which the mind is capable of exercising for

the alleviation and cure of disease. It's power in this respect is vast. It constitutes moreover an available therapeutic means. The physician who commands the confidence of his patient and has the skill to operate appropriately upon his feelings, possesses an advantage the extent of which it is not easy to estimate. This reflection should have it's due weight with the medical student while he is engaged in the formation of his habits and disposition and the pursuit of his studies He should endeavour to acquire such a manner, he should cultivate such traits of character and aim at such a knowledge of his profession, that, when engaged in the active duties of life, he may win confidence in his ability as a medical man and in his worth as a social being. Nor will he be leaving his legitimate sphere in thus seeking the means of gaining an influential position in society: neither will he merge the physician in the moralist by addressing himself to the minds of the sick. It is his business and his duty to study the whole nature of man and to

bring every circumstance, moral and physical to bear favourably upon those submitted to his charge. To enforce these sentiments we need only quote a confirmatory sentence from the pen of Sir Astley Cooper. In his lecture on irritation, after noticing the evil effects of fear, anger and grief upon the subjects of surgical operations and of diseases in general, he proceeds in nearly the following words. "It is the surgeon's duty to tranquilize the temper, to beget cheerfulness and to impart confidence of recovery. Some practitioners are so cold and cheerless as to damp every hope; while others inspire an expectation of relief and a disregard of situation which supports the regular performance of all the actions necessary for restoration. It is our duty, therefore, to inspire cheerfulness, to preserve tranquility and to sustain hope even when we are still doubtful of the issue". With this extract from a work of such high authority, we may consider the importance of the principle, we are endeavouring to impress, as fully established. We proceed then to detail a few instances of it's application.

It is by working upon the mind of the patient that the charlatan sometimes succeeds where a regular practitioner has failed. He impresses the patient with the absolute necessity of an implicit obedience to his directions; he enlists superstition and the imagination into his service; he elevates despondency to hope and hope to a positive certainty of recovery: in every way he infuses into the subjects of his empiricism an exhilaration of spirits which tends to promote the secretions and all the functions of health. By such means he often succeeds, particularly in the curable chronic cases, which are commonly put under his direction and which require medication far less than regularity of exercise, rigidly abstemious diet and pleasant mental impressions. These are desiderata which the family physician cannot so easily attain because he disdains the formality and assumption, the novelty of behavior, the air of mysterious importance and the arts of exaggeration to which the mountebank resorts. The latter, when he fails to cure or has the misfortune to kill is silent to the world. But when guided to success or fancied

success by time, chance, nature, or the inertness of his remedies, he obtains a certificate in extravagant terms from the dupe of his cunning. The circumstances are noised abroad and he rises to wealth upon the credulity of mankind. An historical instance of such a fact is that a sale of coloured water as a panacea was made to such an extent some years ago in France that the proprietor of the pretended remedy was thereby enabled to purchase a title of nobility with the appurtenances. The experiments of Perkins with his counterfeit metalic tractors afford additional evidence of the curative power of the imagination. Such, in truth, seems to be the constitution of our nature that the mind must be favourably impressed or at least propitiated, (so to speak), else it will in some degree always interfere with the application and operation of physical agents. Persons frequently neglect to follow all the prescribed directions because unaware of the importance of each particular item, just as Naaman refused to bathe in the river Jordan and be cured of his leprosy because ignorant of the divine blessing which would accompany the ceremony enjoined by the prophet. Thus it

is in every-day life. Patients are slow to follow with strictness recommendations which, in their own estimation, are too simple to be efficacious. — The following anecdote illustrates happily that perversion of the natural action of a substance upon the living frame, which is apt to result from mistaken impressions as to it's nature. A Cambrige student swallowed a glass of wine which he found upon his friends table and was enjoying it's ordinary effects when he was erroneously informed that it was antimonial wine and instantaneous vomiting was the consequence. Opiates often are apt to keep one awake if he supposes it to be a cathartic. Purges will sometimes vomit a patient, if such an action is expected on his part. — These examples may be thought trivial, but they shadow forth a great principle. They teach us never to disregard the prejudices and opinions of those to whom we minister. In this, as in every other respect, the judicious and discriminating physician evinces his superiority over the routine prescriber. He has learned the utility of moral management, and his acquaintence with human nature enables him to conduct it with benefit to the sick and

increase of reputation to himself. He understands the proper use of placebos, but never resorts to them as a cloak for ignorance or an excuse for a fee. He knows that drugs and chemicals must sometimes be administered to invalids in order to induce them to observe the necessary dietetic rules, but he is sure to give them, with that view, only when appeals to reason have proved unavailing. Nor is he contented with effecting merely the negative good of preventing an unfavourable state of mind. He endeavours to secure the positive benefit which will certainly flow from cheerful spirits, mental diversion and appropriate emotions of any kind. Such influences are, it is true generally adjuvant of other means: but the instances are not rare in which moral causes have been the sole agents of cure. — Abercrombie, in his Philosophy of the moral and intellectual powers mentions the circumstance that a young lady, who had been confined to her bed for many months, deriving no benefit from the most careful medical treatment, was restored to health by the excitement of a marriage taking place in the family. The same author alludes to the well-known

fact that diseases of the nervous class almost entirely disappear during periods of public alarm and political convulsion. The reason is that a succession of startling events banishes that listless inactivity of mind and body, which fosters such affections. A remarkable case of a similar nature with that given by Abercrombie occurred within my own knowledge. A young lady of intelligence and respectability had been brought to the very verge of the grave by an almost total loss of the power of digestion attended with extreme debility, emaciation, and other distressing symptoms. She was in this situation for a long time, although well nursed and visited by medical men of standing. At length her death was considered inevitable. At this juncture she requested that prayers should be said for her in the church to which she was devotedly attached. Her wishes were complied with in the morning of a sabbath day, she being aware of the fact and having her mind strongly exercised upon the subject. In the afternoon, to the great surprise and delight of her friends, she arose from her bed, dined with an

appetite and attended the services of her church in the evening of the same day. This event may by some be referred to a miraculous interposition of Providence, but it will generally be regarded by professional men as a striking instance of the sanative operation of well-directed mental impression upon a disease, which depended in all probability upon nervous derangement. - Upon the same principle we may explain those instances which have been recorded of the sudden acquisition of speech in persons previously mute. This has generally occurred in moments of intense religious devotion and hence has been regarded by the superstitious as a miracle. But the physician of the 19th century views such cases in a different light. He sees in them a proof of the operation of moral causes upon the physical system to an extent which to the world at large seems scarcely possible.

Paralysis has been very often suddenly removed by a strong exercise of volition under the influence of exciting emotions, as those of fear and

anger. Persons confined to bed with paraplegia, on hearing that the house was on fire, have rushed forth bearing articles of furniture upon their shoulders. A lady, who had suffered from the same complaint for two years, had the use of her limbs restored by an individual who artfully contrived to incite her to an effort to walk. Having told her that it was a dislocation & filled her with a firm belief that he could relieve it, he exacted a solemn promise that she would at an an appointed signal endeavour to walk across the room. He then proceeded to perform certain manipulations sustaing her in the upright position, and concluding with a clap of the hands, he gave the excited woman a slight impulse and on she walked to the appointed spot. - So frequent are examples of the kind that, if the deity of our Savior rested only upon his having "said unto the sick of the palsy 'rise and walk'" and having been obeyed, the modern skeptic might with some plausibility doubt his divinity. So intimately hath God, in his wisdom and might, associated

spirit and matter in the person of his creature, man.

But mental excitement is known to operate in a powerful manner upon diseases of a much more tangible character" than the above-mentioned. A naval officer was laid up in his cabin by an attack of gout, when news was brought him that his ship was burning: in a few minutes he was on deck and the most active man there. — Dr Rush states that a lady in the lowest stage of typhus fever began to recover as soon as he succeeded in awakening in her mind a sudden and vivid recollection of all her early domestic connexions and enjoyments. This he effected by exclaiming upon entering her apartment, "The eagle's nest!" in allusion to one which they had frequently visited together in their youthful rambles. Her attention was roused, her countenance showed strong indications of pleasure, and her system responded to the stimulus of mental impression when the usual means had utterly failed. The lady lived for years to

thank her worthy preserver and to salute him in their social meetings with the magical words by which he had saved her life. This interesting anecdote would lose something of it's novelty if all similar instances were related and still more if the example of Rush were more generally imitated.

Many of the cures attributed by the vulgar to the disgusting remedies they sometimes use, and many recoveries among the wealthy and refined ascribed to the action of mineral waters &c, are no doubt the effect of the imagination. It is known that the wounded of an army recover much more rapidly and surely when success attends their arms, than when they have met with defeat. — Prof. Smith, relating the case of a man who fainted at the very mention of an operation, remarked that he would be very unwilling to use the knife upon this individual. Dr Paris alludes to the effect of the mind as modifying the action of medicines and leading to fallacies in regard to the efficacy of the latter. He quotes the historical incident that at the seige of Breda

in 1625, the garrison suffered greatly from the ravages of scurvy until the Prince of Orange, unable to relieve the place, sent in by a confidential messenger an alleged infallible remedy. It had the desired effect but was afterward acknowledged to be merely a little colouring matter dilnted in a large quantity of water.

It is in the recent mode of managing the insane that the efficacy of of moral treatment is most clearly manifested. It may appear irrelevant to our subject to draw illustrations from the history of a mental affection, but the seeming inconsistency will vanish when it is recollected that insanity is generally complicated with and sustained by disease of the brain, and that, until of late, the treatment, where any was pursued, consisted of personal restraint, corporeal punishment and the administration of various and useless medicines. In modern days a great and happy revolution has been brought about in this department of the healing art. The insane were formerly regarded as irremediably stricken of Heaven, insensible to kapping

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or misery, careless of pleasure or pain. Now, appropriate moral influences have been substituted for cruel neglect or still more cruel treatment. Mental occupation and discipline have been provided; literary and religious instructions have been afforded amusement and exercise in open air have been allowed: a judicious degree of personal liberty has taken the place of chains and dungeons, and a system of manual labour has been established. Besides this, the physical comfort of the insane is looked upon as a point of importance; their general health is watched with care; a few sedative and regulating medicines have banished supposed specifics and active drugs: finally, measures have been taken to secure to the proper recipients the advantages of early attention.

By the use of such means, especially of those addressed to the mind, the most gratifying results have been obtained. Multitudes, whom reason had deserted, have regained their rightful guardian and resumed their stations among the rational and the happy. Few of those who have enjoyed the advantages of the institutions founded

for this purpose, have failed to derive some degree of benefit from the humane and scientific mode of treatment now so generally adopted. Besides the amelioration of their condition as regards externals, many of them, still deprived of the light of reason, have evidently been rendered happy in their illusions. Their madness has been changed to an agreeable form. "Demoniac frenzy" has subsided into placidity melancholics have become cheerful, while some have been rendered so joyous, that, had they been fully re-awakened to the stern realities of life, they might have exclaimed with the Roman, "my friends, you have ruined me." Such instances of the efficacy of moral treatment in this most fearful of maladies are abundantly afforded by every well-conducted lunatic asylum. We cannot enter into the details of this interesting topic. Enough has been said, however, to show that the subject affords the strongest confirmation of the views which it has been the object of this paper to present. With a few additional remarks to the same end, we shall conclude.

"There are many varieties of disease included under the terms, nervous, hypochondriacal and dyspeptic, which are very often brought on and as often relieved by causes altogether mental." Many of these affections are superinduced mediately or immediately by harassing cares and protracted grief; many by undue excitement of the various passions, and many by the want of mental occupation. Every case of the kind must be treated with reference to it's origin. The physician's own good sense must guide him in the management of each individual. Much will depend upon the extent of his acquaintence with human nature; much, upon his sagacity in detecting the true source of the disorder and upon his dexterity in bringing the proper influences to bear upon the patient; and not the least essential requisite for success will be a reputation for professional skill, kindness of heart, virtue and uprightness.

The general practitioner will seldom meet with a case of serious sickness in which the influence of the mind upon the disease, direct or indirect, for good

or for evil, will not be an important consideration. If he cannot wield the mind as readily and as effectively as an article of the materia medica; if he cannot and ought not always substitute moral for medicinal means, he may yet secure the strongly adjuvant influence of a suitable frame of mind, or, at least, avoid the evil effects of the reverse condition. He may quiet apprehension, he may soothe irritability and give diversion to the thoughts. He may warm the sick man's heart with kindness; gladden it with hope or instil courage and patience into his bosom. He may lessen the tediousness of convalescence or, if nothing else remains, he may diminish the horrors of approaching death. Acting thus, he will aim at the happiness as well as the health of his patient; he will possess the merit of physician and philanthropist; he will secure the approbation of heaven and of his own conscience.

Alexander Robinson

Acute Pericarditis.

An

Inaugural Dissertation

on

Acute Pericarditis

Submitted to the Examination

of the

Provost Regents & Faculty of Physic

of the

University of Maryland

for the Degree

of

M. D.

by

John C. Earle

Centreville

Md.

Feby 7th. 1845.

In choosing a subject for a thesis, it is of little consequence what disease we select: there being few maladies to which the human body is subject, that are not important, either from the discomfort to which they give rise, or from there tendency to abreviate the span of human existence. If the diseases to which any one organ is liable, can be said to be pre-eminently important over those of another, they are those to which the heart and its membranes are subject. The derangement of an organ, so strictly vital, must necessarily lead to perilous results. The healthy performance of the functions of the heart, are not less essential to life and health, than are those of the brain or the lungs. For in truth the nourishment and well being of any and every part of the frame, depends on its being duly supplied with a sufficiency of arterial blood, and relieved of that which has become venous; for the performance of which office the heart the centre of the circulation,

should be sound in structure, and perfect in function. The heart however, like all other organs of complex structure, is liable to organic changes and may thus be rendered incapable of performing its functions. These organic changes or rather diseases, even till within a few years, but imperfectly understood, the means of their diagnosis being limited, before Laennec made his grand discovery of auscultation and percussion. Since which period our means of diagnosing diseases incident to the organs contained within the thoracic cavity, has been greatly facilitated, and we are now enabled not only to determine the mere presence of diseases of this important organ, the heart, (as was formerly the case) but by recent improvements in its diagnosis, one skilled in auscultation can say with almost perfect certainty, what particular texture of the organ is affected, whether its muscular substance alone, and to what extent, or if its surrounding

membrane, be the part suffering from disease. Inflammation of this investing membrane, called pericardium, is one among the most common of its diseases, and is termed by nosologists Pericarditis. A brief view of the anatomical characteristics of this disease: the symptoms that accompany it: and its treatment, will occupy the greater portion of the following pages.

Pericarditis is sudden in its invasion, and may terminate speedily, destroying life sometimes in a few days, but frequently proves fatal at a more remote period, there generally supervening ~~xxxx~~ chronic organic disease which eventually destroys the patient, perhaps more slowly, but almost as surely— I do not however mean to say that this disease is incurable, for there are few acute inflamatory affections, more under the control of the physician when called upon in time than is acute uncomplicated pericarditis.

But unfortunately this membrane is seldom inflamed, without the inflammation extending to similar membranes situated near it, forming serious complications. Hence it is its frequent occurence, and its liability to involve other membranes near it, exciting in them diseases of more peril than pericarditis itself, that makes this disease of interest and importance to the practitioner.

Pathology. The anatomical lesions, found on post-mortem examination after pericarditis; I should think from the descriptions given in our late works, are well marked and characteristic of the extent of inflammation during life. I have been present at but one autopsy, when the pericardium was diseased, in which most of the appearances described as usually occurring were present. I therefore intend as near as possible to give from my notes, the appearances then presented: and with the aid of several works which I

have by me, will endeavour to give the lesions that commonly occur during this disease.

On opening the pericardium, which is a serous membrane, and shut sac, we find nearly the same anatomical changes, as when similar membranes are found inflamed in other parts of the body.

The changes most common, are as follow; preternatural redness; coagulable lymph, adhering to the surfaces of the membrane; and serum effused within its cavity.

The redness is somewhat peculiar, being of a scarlet hue, and seldom pervades the whole of the inflamed portion, generally showing itself in specks which become conjugated into patches of considerable extent. Dr. Hope and others, describe these patches as presenting a dotted or mottled appearance. This redness is however, occasionally extensive, and uniform like a

stain; redness alone, does not afford conclusive evidence of pericarditis having existed; as serous membranes are liable to redness, from other causes than inflamation; but when conjoined with an effusion of lymph or serum, is a marked symptom. The inflamed pericardium, secretes both lymph and serum at the same time, and it is supposed from the same vessels; after a short time the lymph coagulates, while the serum remains fluid. The coagulated fibrin becoming firmer and more consistent, is sometimes deposited in detached spots or flakes, but most generally forms a contiguous layer over the whole surface of the pericardium.

The thickness of this deposit, usually varies from one to five lines, but has been known to be as much as an inch. If the false membrane thus formed be stripped off; its adherent surface is found to be smooth, while the opposite or unattached surface is rough.

The fibrous deposit, is not arranged in smooth layers, but is rugged villous, or cellular; some have imagined it to resemble lace-work, sponge, or honey-comb. Dr. Watson compares it, to the rough surface of pieces of tripe, which are found in butchers shops.

The lymph when first secreted is of a pale straw-colour, but as it becomes older acquires a deeper hue, varying from cinnamon to an intense red, or mahogany colour. When of this latter colour it is said to secrete bloody fluid. Dr Hope says the object which nature proposes to herself in the effusion of lymph, is unquestionably to effect reparation.

This is accomplished by adhesion taking place, between the two surfaces of the pericardium, they being previously covered over with a layer of fibrin and thus brought in contact.

But by this means we do not have perfect reparation, the gluing together of the two ~~surfaces~~ surfaces of the pericardium, give rise to other forms

The pericardium is however but little if at all thickened by inflamation, as it appears to be when its surface is covered over by fibrin, for when this false membrane is taken off it looks again nearly natural, it being but slightly reddened, which is owing to the great increase in vascularity of the pericardium. (This redness has been spoken of before)

The serum which was effused conjointly with the lymph from the inflamed pericardium, xx is of a yellow colour slightly tinged with green. It varies in quantity being considerable at first, but is soon absorbed after the first violence of the inflamation begins to subside, it seldom amounts to more than a pint. There was once four pints found.

If however the serum should be no longer effused from the pericardium, but by the secreting lymph, the fluid changes its appearance, becoming more turbid, milky and opaque, and eventually assumes the character of pus.

causes. Pericarditis like most other internal inflammations, frequently arises from exposure to cold, particularly after having been confined to a warm apartment.

There must however have been some predisposing cause acting on the system, at the time of exposure, for take the same individual at any subsequent period and subject him to the same amount of cold, under similar circumstances, and he may suffer no inconvenience, and besides the pericardium must in some way be predisposed to inflammation, for why should we not have instead of pericarditis either pluritis or peritonitis, both diseases being inflamation of a serous membrane alike in that respect to pericarditis, and they all being equally liable to occur from exposure to the same exciting causes.

But it is however difficult to determine, respecting this predisposition.

Pericarditis may also result from blows and injuries over the precordial region, and wounds

extending through the walls of the thorax, puncturing the pericardium.

Pericarditis is known, to occur very frequently during acute Articular Rheumatism, and this we might expect from what is known of the character of Rheumatic disease, its great tendency to attack fibrous tissue alone, wherever found, but more particularly when it exists extensively, as about the large joints, thus giving us what is called articular rheumatism; now the pericardium is in part made up of fibrous tissue, hence it is called a fibro-serous membrane, which membrane must here as else-where, be subject to that peculiar kind of inflamation belonging to rheumatism.

It is thus we can account for affections of the heart co-existing with arthritis.

One of the well known characteristics of articular rheumatism, is its tendency to metastasis, and it is probable this is what most frequently occurs during an attack of this disease, we generally first have arthritis, and in a

few days have evidence of metastasis, or extension of the rheumatic inflamation, to the fibrous tissue about the heart, thence to the serous portion of the pericardium, from sympathy of contiguity, giving us rheumatic pericarditis.

But the arthritic symptoms do not always show themselves before the cardiac; Dr Watson mentions, having met with several cases in which the cardiac symptoms preceded those of arthritis, by several days, and hence must have originated immediately in the fibrous tissue connected with the pericardium. But it is generally believed that most frequently, the cardiac and arthritic symptoms co-exist from the beginning and throughout the whole disease. Dr Watson says that most always the cardiac and arthritic symptoms come on at the same time, proceed together and are aggravated or mitigated simultaneously. He quotes Dr Latham on this subject, who says. The cardiac affection is incident to all the degrees, and all the stages, and all the forms of Acute articular rheumatism,

It is not more to be looked for when the disease is severe, than when it is mild more at its beginning than during its progress and decline, more when it is shifting and inconstant in its seat, than when it is fixed and abiding.

Symptomatology. The following are the symptoms that most commonly occur in pericarditis.

There is fever symptomatic of the local inflamation, and a pungent lancinating pain in the region of the heart, shooting to the shoulder, and extending down the arm. The pain is increased by full inspiration, by pressure over the pericordial region, and upwards against the diaphram, by means of the fingers thrust under the cartilages of the false ribs.

There is also oppression at the epigastrium, a catch in the breathing, a dry cough, inability or unwillingness to lie on the left side, and sometimes in any position but one, which is on the back.

There is palpitation of the heart, the impulse of which is sometimes violent, but usually regular though its beats may be unequal in strength: at the

times it is more feeble and irregular. The pulse is most always frequent and generally at the onset, full hard and jerking; but may be small feeble intermittent and irregular from the beginning. Dr. Watson ducribes as occurring early in the disease a singularity of manners, a peculiarity of expression of the countenance, and strangeness of deportment, mixed somehow with an aspect of distress. He also says there may be delirium, sometimes quiet, but often wild furious delerium, not depending on disease of the encephalon.

There are also physical signs of importance; at an early period of the disease, before the effusion of fluid is extensive, or after it has been effused and is again absorbed, we have the two surfaces of the pericardium roughened by inflamation and deposit of fibrin, sliding one over the other, giving us the friction sound or the to and fro sound of Dr. Watson. Later in the disease after the effusion of fluid is considerable, distending the cavity of the pericardium. thus keeping the two surfaces apart

there is of course an absence of the friction sound: but there is a dull sound or percussion over a large space than natural in the situation of the heart. There is also a circumscribed fulness or elevation of the chest in the same region, and the respiratory murmur is no longer heard over the heart, the lung being pushed out of its natural position by the distended pericardium.

Diagnosis. There is scarcely any inflammatory disease of which the diagnosis has been considered more difficult than pericarditis.

Even Laennec was forced to acknowledge that he often on examination after death discovered the disease in a severe form where no symptom led him to suspicion its presence, and on the other hand he had frequently witnessed all its symptoms without finding a single vestage of the malady. Dr. Hope gives a case which he says Andral related, that appeared to be and was treated as marked inflammation of the brain, and yet this organ was found perfectly

The rubbing sound; or dullness on percussion, particularly when it is circumscribed, & attended with protrusion & the Diastolic & Systolic movements of the heart are remote while the patient reclines on his back

sound on examination after death and the heart was affected with intense pericarditis.

Such cases as the above render the diagnosis of this disease obscure, but they must be extremely rare; it is however necessary to know that they do sometimes occur. When we have pain in the immediate situation of the heart, increased by pressure, and is accompanied by increased action of the organ and fever, there can scarcely be a doubt of the existence of pericarditis.

This disease however, is rendered obscure by the occasional absence of pain, and by the variable nature of the other symptoms, the pulse for instance displays at once time or other almost every kind of character. Its diagnosis is also rendered difficult by the frequent presence of inflammation of some of the other viscera of the thorax, particularly of the pleura, the pain of which may be over the præcordial region. But should the symptoms characteristic of the other thoracic diseases be absent, the negative

evidence thus obtained fixes the disease on the heart.

Pericarditis is also diagnosed from endocarditis by the presence of friction sound and dulness on percussion: and also by the absence of certain physical signs pathognomonic of endocarditis, such as bellows sound &c.

Prognosis. In the first of this disease if the inflammation be violent, and the effusion of lymph and serum be large, the prognosis is doubtful; for the fluid effused is sometimes so enormous as to compress the heart, interfere with its action, and cause speedy death. When death does not occur, the amount of fluid not being very extensive it may be absorbed and the patient recover. But when the quantity of fluid is not sufficient to cause immediate death, adhesion generally takes place between the two surfaces of the pericardium, thus rendering the ultimate prognosis unfavourable. Other organic diseases supervening which eventually destroys the patient.

Complications. Pericarditis very frequently, indeed most always is complicated with endocarditis Dr. Watson says the one disease is scarcely ever present without the other. Pericarditis and Pleuritis also frequently coexist. The inflammation of one membrane extending to the other. the lower edge of the left pleura being in contact with the pericardium.

Treatment. Pericarditis as should all other acute serous inflamations, should be treated energetically from the first. Inflammations may be arrested in their progress if taken in time, but the loss of a few hours early in the disease, may seal the fate of the patient. The antiphlogistic treatment, in as energetic a form as the strength, and condition of the patient will allow, should be employed with the utmost promptitude. Should the attack be recent. blood should in the first place be drawn freely and by a large incision from the arm, so as to produce syncope. and apply from twenty to forty leeches, according to the strength, to the præcordial region so soon as the faintness from the venesection disappears and reaction

commences: unless the pain be completely subdued the above treatment should be repeated. If the bowels be at all confined, we should administer a purgative. Hydrarg. Proto-chlor. and Ext". Colocynth. Comp. may be given, and in a few hours be followed by a draught of Magnes. Sulph. and senna. Cooling diluent drinks should be allowed in unlimited quantity, thus by diluting the blood to render it less stimulating to the heart. Tart. Ant. et Potassæ may also be used with advantage, give one eighth of a grain every two hours, so as to produce nausea. But antiphlogistic treatment alone is not to be relied upon: for although it will check the inflammation, it can neither prevent effusion of lymph, nor with any degree of certainty cause its absorption. Mercurials are our best remedies to promote absorption: Which should be given until ptyalism is produced. From two to four grains of Hydrarg. Proto-chlor. or from five to ten of Mass. Hydrarg. prevented from acting on the bowels by a grain of Opium three times a day

commencing soon after the first bleeding, and purging, will generally produce salivation in a few days. A manifest abatement of the symptoms generally takes place immediately on the mercurial action becoming apparent in the mouth. It should be kept up for a week or ten days unless the symptoms completely yield, before the expiration of this period. In the advanced stage of the disease blisters may be applied with advantage, to promote the absorption of the fluid.

If pericarditis coexist with rheumatism colchicum may be given. During convalescence, spare unstimulating diet, and extreme tranquility must be enjoined, until the action of the heart has become perfectly natural.

An

Inaugural Dissertation

On

The Effects of Profession and trade on Health

Submitted to the examination

of the Provost, Regents and Faculty of Physic

In the

University of Maryland

By

William, M. Hammond

of

Baltimore County

[redacted]

For the degree of Doctor of Medicine

Feb 1845

Md.

Effects of Profession and trade on Health.

This is a very important Consideration and may be divided into various heads.

Diseases incident to affluent idleness are chiefly such as arise from indolence and want of some definite object of pursuit – hypochondriasis dyspepsia gout &c. For such persons the best remedies are rural Amusements intellectual pursuits mingled with sufficient inducements to take exercise in the open air.

Diseases of literary men are chiefly produced by want of attention to regular exercise to the open air giving rise to dyspepsia and Constipation; by irregularities in the time of eating and sleeping and by excessive use of the eyes in artificial light. They are best obviated by abridging the hours of study and mingling sedentary avocations with active and social occupations. Literary men however especially in France have been a long lived caste –

Clergymen have a wholesome intermixture of

sedentary with active duties: and if their lungs be sound they are generally long lived.
Lawyers when their occupations are chiefly at the desk are subject to the diseases of sedentary persons: but barristers when not excessively harrassed by toil may generally be considered as engaged in a healthy occupation. Many of our judges attain extreme old age.
Medical men from the general activity of their pursuits their knowledge of the causes that promote health And the wholesome exercise of the mind and body induced by their profession are generally considered as a long lived class: but in this as in other learned professions small account is made of those who die before they have become known of those who pine away from penury And hope deferred or whom a desire to better their condition sends abroad to perish on inhospitable or pestilential shores: yet taking the whole together the Medical profession is certainly favourable to longevity

Schoolmasters Clerks &c are subject to the usual diseases of sedentary persons and to those produced by passing a great part of the day in vitiated air with the sternum leaning on a desk. Such persons should live at some distance from the scene of their labours that they may be compelled to take exercise in the open air These observations apply also in some degree to Merchants to Master Manufacturers and shopkeepers, but a British Merchant has when successful an enviable life. The morning is dedicated to business and the afternoon to his family and friends, while his home is usually remote from the crowded streets in which his Counting house is necessarily placed.

The Shopman however generally leads a very different life. He is late and early in the shop the whole day is spent in serving Customers and in many instances his hours of rest are abridged by the duties of his business which afford him no time to take exercise

in the open air. This is peculiarly hard on young persons perhaps sent from the country to be immured in the smoky atmosphere of a crowded and narrow street. Multitudes of both sexes annually fall victims to this change. Soldiers and sailors when they escape the perils of training to their laborious occupation are often healthy if temperate and if care be taken of their health by their superiors. Their ailments frequently arise from their own intemperance as much as from the casualties of their calling. Excessive fatigue is certainly unfavourable to longevity and when we find very old persons in this class we may attribute it in a great measure to the iron nature of constitutions which have enabled them to resist the hardships to which they must have been subjected in their younger years. Soldiers on duty are more exposed than sailors to wet and cold to unwholesome climates and to bad food. A sailor carries

with him his provisions and his change of raiment. And in the British navy he has much attention paid to his health while on board his ship. Long marches are apt to produce diseases of the hip joint and hernia in especially in young soldiers.
The evil effects of the anticipated conscriptions in the time of Napolean were fearfully exemplified in France "they encumbered the road sides and the hospitals." as he once admitted.
"The too early employment of youth in military duties is condemned by Baron Percy and Larrey by Cooke by Sir James Macgrigor and by all writers on diseases of Soldiers.
The great Mortality among young recruits in India has been pointed out by Ballingall Arnslie Annesley and Marshall who Considers that no soldier should proceed to our Indian possessions before the age of twenty one. Dr Burke has expressed similar views and in a valuable publication by Kirkhoff physician

to the Dutch forces it is stated that no recruit ought to be received into the Army till he has Completed his twentieth year. The Sailor is also liable to hernias from strains in the course of his laborious duty. Sailors are subject to inflammatory diseases of the chest and to dyspepsia from the use of indigestible food such as salted meat with few fresh vegetables but still more from the abuse of tobacco. When long kept on salt provisions they are likewise liable to scurvy Agricultural labourers have very generally a healthy occupation when the returns of their industry afford them sufficient aliment and Comfortable Clothing. Their situation is much more favourable to health than that of the town Mechanic. The same may be said of Carters postillions Coachmen except that the latter are often exposed at night to the inclemencies of the weather and are not always

remarkable for sobriety.

Quarrymen and Stone Masons are liable to serious injury from the minute dust they create entering the air passages along with their breath. This often gives rise to a species of Consumption and such persons are seldom long lived. It affects the stone Masons of Scotland more than those of England the former work under sheds the latter in the open air. Marble Cutters for the same reason are unhealthy and even the employment of a sculptor cannot be considered as a good one for a person of delicate lungs. Carpenters and joiners exercise healthy trades because they require activity and are freely exposed to the air in many of their operations. It is very different however with artizans whose trades are chiefly carried on in a vitiated atmosphere. The trade of the Weaver is always rather unhealthy from his working

in a confined space - but the introduction
of Machinery has reduced the pittance
of the hand loom weaver below what
can support life with any comfort
and his habitation is proportionally
wretched - There is in this occupation
exercise to the limbs but the breast
leans against the beam which
with wretched fare and depressed
spirits renders the trade of the weaver
unfavourable to health.
Milliners and tailors are confined in hot
and ill ventilated rooms they work too
many hours in the day and often have
their natural hours of rest greatly
abridged - Milliners are liable to become
short sighted and the practice of
biting the thread generally injures
their front teeth. The lives of young
females are often sacrificed to this business
Tailors assume a faulty position whilst

at work and the consequence is that when they walk they have a peculiar shuffle - The increased power imparted to the muscles of the back from long supporting the weight of the head causes the shoulders to be preternaturally drawn back - they are also very subject to phthisis - Shoemakers are more healthy but the pressure of the last against the stomach and stomach is sometimes injurious - Artisans exposed to inhale minute particles of dust are very liable to pectoral diseases This is especially the case with Knife and needle grinders they are subject to the disease called grinders rot an incurable consumption which renders this occupation most deadly. Currents of air and interposed plates of glass have been used to remedy the evil - Large magnets have been employed to arrest the dust but its cannot abate the dust from the grindstone

itself which is not less fatal —
Good essays on this disease have been
published by Dr Johnstone of Worcester
in 1796 and by Dr Knight. The latter
states that out of 2500 grinders in Sheffield
there were only 35 who had lived to 50 years
of age and not perhaps double that number
who had reached 45 but of 80 fork
grinders who used the dry stone it was
stated that there was only one who
was so old as 35 years — Workers in
lead brass and copper &c are subject to
disease from those substances finding
their way into the system as already
stated — The fumes of mercury especially
in wet gilding are exceedingly apt to
produce palsy, tremors and finally
confirmed mercurial palsy — It would
also appear that the vapour of
mercury is very injurious to the lungs
Jewellers and Gold workers are liable

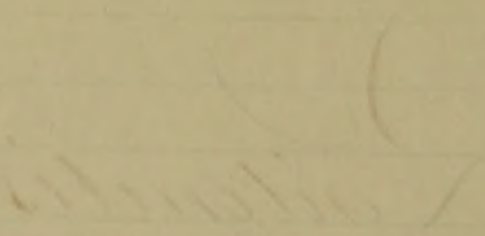
to sustain injury chiefly from the fumes of charcoal which are not sufficiently guarded against in their workshops which are moreover hot and ill ventilated hence arise dyspnoea vertigo &c – Bleachers and dyers are liable to suffer from acid fumes in some instances and also from sudden changes of temperature With these we may class practical druggists who also suffer in their health from inhaling dust in pounding acrid or poisonous substances Chimney sweepers are liable to consumption and to a peculiar cutaneous disease the chimney sweepers cancer which chiefly affects the scrotum. Early excision removes it but it is liable to recur – There is an excellent paper by Mr. Earle on this disease in vol xii of the Medico chirurgical transactions

It rarely attacks those under 25 and it is most common between the ages of 30 and 40 – one case occured in a child 8 years – The children employed as Climbing boys are subject to diseases of the skin from the irritation of soot entering the bronchial tubes and often to serious injuries from the brutality of their masters and it is earnestly to be wished that the Legislature would put a final stop to this most barbarous mode of cleaning Chimnies which is a disgrace to any civilized Christian Community

Persons exposed to a high temperature such as Cooks Confectioners Bakers are liable to rheumatism from sudden changes of temperature Bakers were remarked to be the most general victims of the plague at Marseilles in the beginning of the

last century – Sugar refiners are exposed to much heat and to sudden chills – Smelters of iron and other ores are subject to the same to cough from dust especially if they are founders and their eyes become weak from the intense glare of the metal – Glass blowers not only suffer from these causes but also from the excessive exertions of their lungs which often give rise to bronchitis and asthma —

Peritonitis



An Inaugural Dissertation on Peritonitis

Submitted to the Examination of the Provost Regents & Faculty of Physic of the University of Maryland for the Degree of M D

By

William A Keener

Baltimore
February
1845

Peritonitis

Affections of the peritoneum were but little known before the days of Bichat, & who preceded him had given some attention to this disease, and advanced many hypothetical notions respecting it, but it is to Bichat who by his persevering and indefatigable labours in this disease that the profession is mostly indebted for its clear expositions. Before his day it was supposed that any inflammation of the peritoneum must necessarily involve the viscera over which it passed, & that either of these viscera could not have its parenchyma inflamed without transmitting this affection to its investing membrane, the peritoneum.

These pristine notions have however been disproved by modern pathological researches, and so fixed is the subject now that it cannot be shaken, although Sir Astley Cooper & some others pretend to show that dissections never exhibit the peritoneum in a state of inflammation without the viscera it covers being involved.

The establishment of these facts is of vast importance to the Science of Medicine, pathologically but practically it appears to me that it can be of but little use — for even with the knowledge of them it is impossible when brought to the bedside of a patient labouring under peritonitis to diagnose the extent of the inflammation

Doct. Dewees says "that peritonitis purely so called may however be confounded with inflammation to which the different viscera of the abdomen are sometimes liable — as with the inflammation of the Stomach, the intestines, the Spleen, the liver &c &c — from which it is impossible to distinguish it, but very fortunately a mistake of this kind must not be very serious, perhaps in a practical sense, as the curative indications would be the same" —

Having had no opportunities of studying the Anatomical characters of this disease from Post Mortems, I shall supply this part of my subject by a quotation

"One of the most common appearances on turning aside the parietes is an adhesion of the great omentum to the inferior folds of the intestines, or even to the pelvic organs, — the raising of this membrane discovers the convolutions beneath inflated, agglutinated

by soft albuminous exudations, and suffused on their anterior surface with a bright vermillion tint - On separating the folds we find according to the patient's character of the inflammation, serum clear or milky, sero-purulent fluid, and actual pus in the interspaces - These liquids are found in still greater quantity in the iliac and pelvic fossae - The collection of pus among the adherent folds appear like small abscesses - The organization of the false membrane depends partly on the time which has elapsed since the commencement of the inflammation, and the constitution of the individual - In some cases there is very little tendency to organization though the inflammation has lasted several days; in others the matter is so plastic, that blood-vessels have been detected in it after a few hours - The colour of the fibrinous deposit is sometimes a yellowish green, more commonly a dull white -

Peritonitis may be universal or partial - The inflammation is often limited when there is but little motion between the opposite surfaces, and, conse-

quently little chance of contact, et vice versâ — Hence it is more diffused over the small intestines, but circumscribed, in the neighborhood of the Coecum, the liver, the Spleen, & the uterus —

Gangrene and ulceration from acute peritonitis are very rare —

The Peritoneum is very susceptible of inflammation; its very organization seems to favour it; hence the variety of causes which may produce it — It may originate from external as well as from internal causes; mechanical violence, as strong compression blows, falls, wounds &c &c — Chemical irritations, as the injection of stimulating liquids within the cavity of the belly, unabsorbed effusions of blood, pus, serum, bile &c &c — The internal causes may be pressure from pregnancy either uterine, or extra uterine, enlargement of the ovaries &c — Violent and long continued efforts which may put the peritoneum upon a stretch, as lifting heavy weights, jumping, carrying heavy loads &c — Sudden application of cold to the body, especially if it be in a state of perspiration — or if it be long or partially, applied, — too cold water in bathing — Sudden and powerful passions or emotions of the mind — The

sudden suppression of the lochia or menses in females — The epidemic constitution of the air has been said to give rise to this disease, in proof of which Rigot, Broussais and Gasc may be quoted —

Symptoms — An attack of this disease is sometimes preceded by chillings, rigors, and a feeling of indisposition; but frequently it comes on abruptly, with acute pain in some part of the abdomen, usually in the hypogastric, or one of the iliac regions. The pain is aggravated by any motion of the body that puts the abdominal muscles on the stretch, such as, coughing, sighing sneezing, evacuation of the bladder &c — And pressure upon the abdomen is so painful that even the bedclothes may be felt an incumbrance — The position of the patient is on the back, with the legs drawn up for the purpose of relaxing the abdominal muscles — The belly is hot, tense, & for the most part tympanitic as the disease advances — frequently it is attended with nausea, and vomiting from the beginning — and the bowels are not constipated at first — become so in the progress of the disease — The skin is dry & hot; and the

pulse, rapid small and hard, the tongue furred, the lips dry and the cheeks pale. To an experienced eye the disease is distinguishable almost at first sight, from the lowering and peculiar expression of the countenance of the peritonitic patient.

These are the usual symptoms displayed in a well marked case of peritonitis. Instead of a sudden attack it is liable to steal on insidiously, with the absence of the usual symptoms, rather than by assuming the character of other diseases. For instance the bowels may continue to act without impediment during the whole course of the disease; when this is the case it must be inferred that the inflammation, has not extended as usual to the muscular coat, sufficiently to produce either spasmodic or paralytic obstruction. Vomiting under similar circumstances may not occur; the pulse instead of rising to 120 or 130 may keep as low as 80 or 90 or even at its natural rate, and the temperature of the skin may be scarcely at all elevated. After the consideration of these and other anomalies Doct. Abercrombie is of opinion that our chief reliance for the diagnosis, must be placed on the tenderness of the abdomen. In sharp

may exist in many cases where the peritoneum is not at all involved, but this symptom is rather calculated to awaken suspicion of peritonitis in the absence of other signs, than sufficient for distinguishing it from other diseases.

Diagnosis.

In diagnosing this disease, the indications of the pulse should be closely regarded; the importance of which has recently fallen under my own observation. Called to see Mrs A.... colored, act. 35, found her suffering with intense pain in the abdomen, extreme tenderness upon pressure; nausea, constipated bowels, the legs drawn up, and much pain induced when straightened. In fact every symptom, save the pulse, strongly indicating peritonitis. Being unwilling in my diagnosis, I determined at once to treat it as peritonitis. A copious injection with warm applications to the abdomen were used, and to my surprise, every bad symptom had disappeared in 24 hours.

Enteritis, by which we mean an inflammation of the mucous membrane of the intestines, is distinguished by tendency to diarrhoea, pain & tenderness slighter. Pulse soft and absence of vomiting, and redness at the tip

and margin of the tongue – From Mania, it is almost impossible to diagnose; the symptoms of each are so analogous – From Hysteria, it is highly important that it should be distinguished, as the treatment of the two affections is so widely different – Hysteria may be detected by the superficial tenderness, which though greatly increased upon slight pressure is much relieved by deep – And the limbs and chest of the patient may be discovered to partake of the same tenderness though not complained of by the patient – pressure upon the lumbar vertebrae also excites pain in many cases of this description

Prognosis – This disease must ever be considered as one of great danger, particularly if medical aid is postponed till late in the attack, and typanites of the abdomen has taken place, vomiting & constipation established, and the pulse become frequent and thready, and the strength of the patient much prostrated – But if the case is seen early enough for the exhibition of the proper remedies in the first stage, we may entertain fair hopes of its recovery –

The cessation of pain is not always a favourable sign in this malady particularly

when the extremities are cold and clammy, for such is an indication of a fatal result; and neither must we be deceived by the returning action of the bowels, for this condition may arise from a relaxation of the return and splenetic vein, permitting the escape of the fluid contents of the bowels, without any amendment in the condition of the patient.

Treatment.

Being a very highly inflammatory disease, the cause for its treatment is plain and obvious at once, to overcome the inflammation - and for this purpose general bloodletting is our greatest dependence; and on the use of this measure Dr. Abercrombie has made some admirable observations which we quote - "In all cases of acute inflammation, bloodletting can be of comparatively little avail, unless it be used at an early period and pushed to such an effect as to make a decided impression upon the system, as indicated by weakness of the pulse, paleness & some degree of faintness." And a practice to which I am my practice in all inflammatory cases, is to follow up the first free bleeding, by several bleedings at short intervals when the effects of the first

begins to subside — In this manner we prolong as it were, the impression which is made by the first bleeding, & a two fold advantage arises from the practice by — that the disease is checked at an early period, & that the quantity of blood lost in the end is much smaller than would be required under other circumstances — If we allow the patient to lie after the first bleeding 10 or 15 hours, a more shorter period, the effect of it is entirely lost, and the repetition of it to the extent of 20 or 30 ℥ may be required for producing that effect upon the disease which by the former method might be produced by five, and besides in the interval the disease has been gaining ground, its duration protracted, and the event consequently rendered more uncertain — In the inflammation of a vital organ, should not be lost sight of above an hour or two at a time, until the force of it be decidedly broken, and unless this take place within 24 hours the termination must be considered as doubtful —

Tonic purgatives should never be employed — for the object desired by their use, viz, the removal of constipation is the effect and not the cause of the inflammation; and their exhibition by increasing the peris-

-taltic action of the bowels aggravates the inflammation — In some few cases, where from debility abstraction of blood is forbidden, if used in the first stage, they may act beneficially by producing a revulsion to the mucous membrane — But such cases are few; and their most general tendency is to increase the inflammation, by putting in motion the peristaltic action, thereby, destroying the repose of the inflamed parts, and again there is danger of tearing asunder recent adhesions and thus producing additional irritation —

Though the use of powerful cathartics, is condemned, gentle laxatives may be beneficial by keeping up the usual secretions of the mucous membrane; and for this purpose, Castor Oil, small doses Rhubarb, or the neutral Salts may be employed —

Mercury in this disease is highly important, and should be exhibited from the very first, so as to be able at any time to bring the system under its full influence, in case such

should be required — for the accomplishment of this object, we would prescribe Calomel grs iij every 3 hours — a grs of Opium added will prevent irritation, and at the same time mitigate pain — Should the necessity for the medicine become more striking, we can shorten the intervals, and if still more urgent introduce Mercury by inunction — If we succeed in touching the gums, the issue of the case is far more favourable —

For the local treatment, lacking upon the tendrest part of the Adomen, should immediately succeed the bleeding, followed by warm applications — guarding against their being mighty — In the treatment of the few cases of peritonitis, that have fallen under my observation, warm poultices were employed with decided advantage. On their use, however, there is much controversy — Some writers affirming that warm and others that Cold Applications, are more beneficial — But, we side with Tweedie whose opinion is "that in some cases hot fomentations have a good effect, while in others cold evaporating lotions have seemed preferable" —

Blisters should not be employed in the early stages of the disease, as they prevent our ascertaining the state of the parts by pressure, and are not at all desirable until both general and local depletion have been ~~fully~~ freely made — as the disease advances and the belly becomes tumid and tympanitic, with obtunded sensibility, when in fact there is reason to believe that lymph and serum have been freely secreted, a large blister may then effect a very salutary revolution —

Should the vomiting be excessive it is important that it should be arrested as soon as possible owing to the distress and increase of pain it excites — and also because it interferes with the regular use of remedies — It may sometimes be overcome by Hydrocyanic Acid, or by Creosote — and Sinapisms or hot laudanum fomentations applied to the epigastrium —

If the disease still advances after we have expended all our anti-phlogistic measures, our only and last resort is to give nature a chance of

spontaneous cure, by supporting her strength — The patient may be allowed the free use of wine — and quinine dissolved in beef tea may be injected into the colon —

We have said that it is an unfavourable sign when notwithstanding the cessation of pain and tenderness, the bowels still refuse to act, and the abdomen continues tympanitic — Although these indications are mostly unpropitious, still it is not always the case — Tweedie remarks "that sometimes these latter symptoms depend simply on the loss of muscular tone — caused by the inflammation, though the latter has subsided" — When this is the case, the state of the pulse, and the temperature of the body, may give a more encouraging view, — Mild laxatives and Assafoetida injections are useful under such circumstances —

The pulse is often the last thing to mend, continuing frequent long after the pain has ceased, and the bowels have resumed their functions — For this symptom which in many cases may be attributed to the irritability induced by the loss of blood — Digitalis is the best remedy —

Erythematic or non-plastic Peritonitis, is a form of Peritonitis which as Dr. Abercrombie says "frequently attacks puerperal women, & persons suffering from Epidemic erysipelas." It is accompanied by fever of an adynamic character, and which terminates rapidly in the secretion of serous fluid, generally white and watery, sometimes bloody, with scarcely any intermixture of coagulable lymph. The history and treatment of this disease I shall quote from a late writer. The progress of this disease is rapid and the termination generally fatal. The local symptoms are not so acute, as in the common form, the abdomen being less painful & tender, and the bowels often freely opened, but the powers of the system are very soon prostrated, and the pulse from the beginning is feeble and feeble.

Scarcely anything satisfactory can be said of the treatment, local depletion affords some relief, without exerting any impression on the general condition, for doing which, indeed there is little choice what be the means adopted. The rapid introduction of mercury into the system

and maintaining the strength by wine & Bark, appear to us to hold out the best prospect of success — After a single application of leeches, the abdomen should be covered by a large blister —

Puerperal peritonitis is a form of the disease which attacks women almost immediately, or within a very few days after delivery — the usual time of its accession is about the third day — It is accompanied by a highly accelerated pulse, great swelling of the abdomen, with distension, after a shut tonic of this cavity, suppression of the lochia and milk, and the mind as in acute peritonitis is free from delirium for the most part, and what is a distinguishing characteristic of this disease, is the extinction of maternal feeling — The Erythematic form is frequently met with in the puerperal female —

We find both forms of the disease occurring epidemically, the latter especially — but it does not occur so frequently in this country as in Europe —

For the treatment we must be governed by the peculiar circumstances of the case It is accompanied sometimes with

acute and inflammatory form, and again, as is mostly the case, in the typhoid variety, it assumes more or less of the typhoid type — The treatment must have reference to the one or other — I am aware that my remarks on this disease are very crude, but it is merely my object to speak of it as a form of peritonitis —

Peritonitis arising from Intestinal perforation — is the result of ulceration going upon the mucous coats — The ulcers which produce this accident, most frequently are those which destroy the follicles in typhus fever and Phthisis — After the coats proceeding from the mucous to the serous have become eroded, the solution of continuity may be partially caused, by mechanical rupture — This rupture may be determined by pressure of flatus, or of a large quantity of alimentary, or fecal matter, or by the sudden violent pressure of the abdominal muscles in straining at stool coughing, sneezing &c &c —

Symptoms, of Intestinal perforation are very characteristic — the pain comes on suddenly, and is of an excruciating kind

great tenderness on pressure and difficulty of micturition — the pulse soon becomes frequent and feeble, collapse of the features & other indications of sinking — Owing to the superlation of this disease upon some other, the condition of the patient is little fitted to struggle against so serious a lesion, consequently it mostly proves fatal —

Our only hopes in its management is to support the strength of the patient and keep the bowels in repose — For the accomplishment of the latter large doses of Opium should be exhibited — Bleeding can not be practised on account of the already enfeebled state of the sufferer — And there is no time for the employment of Mercury —

Dr. Stokes relates an instance of the successful treatment of a case which we subjoin — "In the next place the disease was of three days standing, and it superseded suddenly from a hypercatharsis, produced by an overdose of Glaubers salts — the patient was apparently in the last stage, when the Opium treatment was commenced. He was ordered a grain of Opium every hour — Next day the symptoms were decidedly improved, and though he had taken

grs xxiv opium, he had not experienced, the slightest Coma, headache, or delirium — The same plan of treatment was persevered in, the daily doses of opium being gradually diminished until the tenth day, when the convalescence being established, the remedy was omitted — During this time diarrhoea set in for three or four days severely; this was treated by the application of a few leeches to the arms, and the use of anodyne enemata — The patient took in all 150 grs opium, exclusive of that in the injections, without experiencing any of the usual effects of this remedy in large doses —

<u>Chronic Peritonitis</u> — This form of the disease may gradually supervene, from an attack of acute peritonitis, or it may be chronic from the commencement, making its appearance slowly and silently —

The causes which frequently lead to it are long continued irritations, of either a mechanical, or even a chemical nature — It is frequently induced by occupations which require long and steady pressure upon the abdomen

as shoemaking, coopering, tailoring &c. Broussais has remarked, that soldiers are more liable to this disease than any other class of people, arising as he supposes from their exposure to cold and moisture, to their frequent bivouacings. The cold stage of intermittents, great age, feebleness of constitution, effusions into the cavity of the abdomen, a neglected state of the bowels & skin, imprudences in diet, may also be causes —

The tuberculous variety — for an account of which we are indebted to Dr. Baron — originates principally in the Strumous Cachexia, and may be developed by any of the common causes of disease, both internal and External —

The anatomical characters of this & this disease are exceedingly various. The omentum, the parietal peritoneum, the intestinal folds, and the surfaces of all the abdominal viscera, are not unfrequently found agglutinated to each other so as to form one mass of disease. Again we find the surfaces separated into sacs of various dimensions owing to the formation of liquid or solid deposits

The liquids are serum of a sanious character, seco-purulent fluid, & true pus, the latter collecting sometimes to the amount of several pounds — The solid matter may be coagulable lymph only in various degrees of organization — largely mixed with tuberculous secretion.

The thickening of the peritoneum varies from 2 or 3 lines to 3/4 of an inch — sometimes the hardness of these formations equals that of cartilage — The surface of the parietal membrane is not unfrequently rough, or presents an areolar appearance, owing partly to the motion of the opposite surfaces while the deposite was going on — and partly perhaps to the simultaneous formation of non-organizable matter, which afterwards separating from the lymph leaves little cavities behind —

Symptoms — The accession and progress of this disease are extremely insidious, and in some cases remain for a long time concealed; — as its invasion can not be recognised by any distinctly marked symptoms —

In many cases there is but very

little pain, in others none at all — Indeed there seems to be something peculiar in the inflammations of the serous membranes, since it is not always attended with pain — this is sometimes the case with the pleura, in Pneumonia, & it has even proceeded to suppuration without the patient complaining of pain —

There may be attacks of pain of a griping character, which come on for a day or two and then subside, and do not return for weeks or months — Again the pain may appear fixed, resembling the stretching of a very tender part, and sure almost to be aggravated by jolts or violent motions of any kind, as Coughing, Sneezing &c — Dock Bacon describes as a very common symptom "a boiling heat" in the region of the Abdomen.

On examination of the belly, it will be found to be more protuberant than usual, and increasing in size towards evening, and should there be fluid secretion we find fluctuation, and dullness on percussion — and there is a feeling given to the hand, which has been well represented

by the term doughy — The bowels are generally irregular, sometimes constipated, but more frequently relaxed; the motions being of a light yellow or stone colour — and of spongy consistence with a good deal of factor —

Nausea is often complained of, and the tongue has a bright red colour, and is glazed or chapped — or it is of a duller hue, but turgid and uneven on its surface — These conditions of the tongue might mislead us, especially when taken in connexion with the nausea and diarrhoea, and impress us with the idea, of disease in the mucous rather than in the serous coat — Vomiting sometimes attends, and the matter discharged is of a leek-green appearance, which is bile acquiring this colour from the action of the acid in the stomach — The secretions of urine are scanty, and a reddish sediment is deposited by them — The skin is prone to perspiration, particularly at night, and is often unhealthy in appearance —

One of the most marked and

constant symptoms is evacuation — The extremities are cold, pinched and bluish — the eyes are sunken & surrounded by a dark halo — and there is a faded look and form of the whole countenance — The pulse is for the most part, more or less frequent and full — In the chronic left by the acute disease, it is said to vary but very little above the average rate — Some authors assert that the pulse is natural in the morning increasing in frequency towards evening —

In tuberculous peritonitis the attack is still more insidious — the disease being completely latent till a short time before death — which takes place suddenly and unexpectedly

In many cases of this sort, we may observe a ~~general~~ falling off in the general health, and strength of the patient, but, still not in such a degree as to awaken suspicion or to cause application for professional assistance — there may have been slight pain, and alvine evacuations,

which have passed for Common bowel Complaint — But suddenly there is an increase of pain, with a rapid sinking of the vital powers, and death ensues within 30 hours — This hasty termination of the case, being caused by a circumscribed collection of pus, having bursted its sac, & diffused itself over the whole Cavity. —

The Prognosis of this disease is always unfavourable — unless the disease can be viewed as the remains of an acute attack & the patient is of a healthy habit, when the chances for recovery are rather more favourable —

Treatment — We can rarely in this form of the disease have recourse to the Lancet, even topical bleeding is often as much as the patients strenght can bear —

Blisters form an important part of the treatment & may either follow the local depletion or alternate with it — If there is much liquid effusion, frictions with linaments, or unguents containing iodide of potassium may be used, and these will also prove beneficial in

causing absorption of the more solid depos-
-ites — Iodine may be exhibited internally
& is said by a recent writer to be very effi-
-cacious — but its use requires much cau-
tion & is best combined with potassium
or with iron — To relieve
pain and diarrhoea, opiates will
be required — Sarsparilla, Sa-
-raxacum & many other of the vegeta-
-ble alteratives may be found highly
useful — The diet should be nutri-
tious & compendious —

Finis

An Inaugural Dissertation
on
Typhus Fever of New England

Submitted to the examination
of the
Provost Regents &
Faculty of Physic
of the
University of Maryland

For the degree of M. D.
by
Nath. B Dunforth
of
Massachusetts

1845

It is not my design, in treating of this disease, to enter into an elaborate discussion of many particulars connected with it, which might interest the curious, and attract the attention of experienced Observers – as the propriety or impropriety of the appellation given to it, the contagiousness of its character &c; but merely to describe in as simple and concise a manner as possible its ordinary phenomena. In doing this, I shall be governed entirely by what has fallen under my own observation within the last few years, and having had but limited opportunities for investigation, during even this brief space of time, I shall, not of course be expected to advance anything new.

typhus fever generally makes its appearance during the latter part of summer, or commencement of Autumn, and continues until Winter. It is not confined to any particular section or locality, but prevails throughout all parts of New England; in maritime towns, and towns situated in the interior; the city and the country - all have ~~suffered~~ felt its fatal ravages.

But that all places are equally subject to its encroachments, I do not admit; for I consider the inhabitants of cities to be far more liable to its attacks, than the inhabitants of country villages. And furthermore, I believe that comparatively few cases of spontaneous origin are to be traced to the country, for the first cases which appear in the country, are, many of them, brought from the city by persons who were laboring under an attack, and who have sought the pure atmosphere of the country, in order to regain their

health. A single case, ~~#~~ brought into a village in this manner, has often been the means of spreading the disease through its whole extent.

The disease does, however, frequently originate in the country, and such cases generally more formidable in their character. On this part of my subject, however, I will not dwell, but go on to consider the causes of Typhus fever.

The causes of this disease are obscure, and many of them entirely unknown. As predisposing and exciting causes, however, may be mentioned mental anxiety, loss of sleep, badly ventilated sleeping apartments, meagre diet, insufficient clothing, hard labor, exposure to atmospherical vicissitudes. Any two of these, by their cooperation, may suffice to bring on an attack. Let us take, for example, the man who toils unremittingly from morning until night

and whose mind is filled with anxiety for his family - is it surprising, that oppressed by this mental and physical burthen, he should become a prey to disease?

Symptoms. After having been exposed to some of the numerous causes, only a few of which I have mentioned, the individual is attacked with pain in back, loins, and limbs, headache, giddiness, loss of appetite, epistaxis, and aversion to exercise. These premonitory symptoms may continue several days, during which time the person flatters himself that he shall soon be better, and therefore neglects to call a physician, or else, suspecting the nature of his complaint, has recourse at once to remedial measures: If he should pursue the latter course, and should require my assistance, I should visit and purge him freely, hoping that by adopting this plan of treatment, at so early a period, I might be able to eradicate the

difficulty at once. Sometimes this course of treatment, vile at the commencement of the disease arrest its progress at once, but in the majority of cases, give as much medicine as you may, and when you please, and the disease vile take its course in spite of all your efforts to contrary. In the latter case other symptoms vile appear - such as chiles, succeeded by flushes of heat, nausea and sometimes vomiting, pulse feeble and accelerated, and increased mental and physical depression. These symptoms are succeeded by others, in from six to twelve hours, which mark a decided change. The ordinary symptoms of inflammation are now conspicuous. The pulse rises, becomes ~~fee~~ full and bounding, the skin is dry and hot, the eyes red and glazed, face flushed, lips dry and cracked. The bowels are usually costive at this stage of the disease, though this is not invariably the case: for sometimes diarrhea commences at the beginning, and

continues throughout the whole course of the disease.

With the above symptoms upon him, a physician suddenly called in, would think the use of the lancet to be imperiously demanded; and such would doubtless be the opinion of any one who was not aware that remedial measures had been resorted to. But I should seldom deem it necessary to abstract blood from the arm, after having given emetics and purgatives, and when also the disease had been gradual in its development. On the other hand, if, when called to a patient for the first time, I should find him with symptoms of high inflammatory excitement, and of plethoric habit, I should take blood from the arm in such a quantity, as should produce the desired effect on the system. Not that I should expect to cut short the disease by venesection or any other remedy at this stage, but to modify it in such a manner, as should tend to procure a favorable termination.

There is a great promenys in this affection, after it has once gained possession of the system, to continue its course in spite of all remedies; and I do not believe that any means used for its subdual, after the stage of invasion shall have passed, will in any considerable degree hasten recovery; but will, as I have said before, so far control the morbid action that is going on in the system, as shall in many cases produce a happy result.

The above symptoms will generally continue four or five days, at which time a train of new symptoms shows itself: these are anxiety, restlessness, delirium, tinnitus aurium, with febrile exacerbations towards evening. Petechiæ make their appearance sometimes at the commencement, and sometimes not until the latter periods of the disease. Rose spots on the abdomen do not usually appear earlier than the seventh; or later than the fifteenth day.

The disease advances. The patient has more or less stupor, his lips are dry and cracked,

his teeth and gums incrusted with dark sordes. his nose filled with mucous, and his eyes with lacrymal secretion. If he can be persuaded to put out his tongue, it will be found covered with a dark brown coat.

These symptoms continue until the powers of the system, no longer able to combat the disease, begin to fail. when symptoms indicative of collapse set in. The patient now lies upon his back, wholly indifferent to objects around him; his legs are separated. and his body constantly slipping down in bed from a deficiency of muscular power. His urine and feces are passed involuntarily, the latter being acrid and highly offensive. If he should survive any length of time. bed sores will form on the hips and nates. At this period hemorages from the bowels sometimes occur, and continue until death closes the scene.

These I believe are the symptoms which

characterise the above mentioned disease.
I will not assert that in every case they
are all present, or that there may not be
others which I have not named; for there
are certain circumstances which may
modify the disease, in particular individuals, in such a manner as to have
it present different appearances. And yet
so far retaining its usual type, as to be
with little difficulty recognised. Differences of location, or even the same location
at different seasons, idiosyncrasy of constitution, may each possess an influence capable of changing its aspect.

Diagnosis. With regard to the diagnosis of Syphilis, there may be some difficulty when it first makes its appearance
in a place; for we have few symptoms
which belong exclusively to this disease, and
what increases the difficulty still more
is, the absence of those symptoms at its

commencement, upon which our diagnosis in a great measure depends, and which are present only at a later period.

I have said that there is a constant variation, both in regard to the time of appearance, and the duration, of the symptoms of Typhus, and hence the difficulty of making out a diagnosis during its first stages. With the following symptoms before me, however, I should not hesitate to make out a diagnosis of Typhus, namely; headache, epistaxis, diarrhea, meteorism, delirium, with a frequent pulse, and a peculiar expression of countenance - a look of indifference, which is not observed in any other disease. It will be of importance also to know the history of the case, as we can then judge whether the patient has been exposed to any of those causes which commonly produce this disease.

Prognosis. In making our prognosis, we should consider the severity of the symptoms, their commencement and duration; and these both separately and conjointly. Let us first take the pulse. If at the beginning the pulse should be from a hundred to a hundred and twenty, and continue so, or increase in frequency, so far as it was concerned, we should look upon it as unfavorable; but if, after having been as high as mentioned, it should diminish in frequency, we should regard it as a favorable omen. Again, if the pulse be only tolerably frequent, and there is increased delirium, with metenism, we should consider the patient in a dangerous condition. Diarrhea, without other formidable symptoms, should not be regarded as unfavorable, unless it occurs during the latter stages, and indicate local inflammation.

Hemorrhages from the bowels during the last stage, may be looked upon as the harbingers of death.

In making a prognosis in this disease, the physician cannot use too much caution. He should always bear in mind the fact, that no one of the above symptoms, considered alone, is sufficient to enable him to make a prognosis with any degree of certainty; but their connexion with, and dependence on, one other, should be carefully studied, before an opinion is hazarded in relation to the issue of the case.

Morbid Anatomy. Although we cannot always anticipate from the symptoms present during life, the anatomical characters of Typhus, yet there are certain symptoms which do almost uniformly indicate the structural changes that are going on. I allude to

tympanites and diarrhea. These when present, clearly point out the fact that some part of the intestinal tube is the seat of difficulty. Dissection reveals the nature of the difficulty. The termination of the ileum near the ileo-cæcal valve, is found to be one large seat of ulceration. But it will not always be the case that the inflammation will have advanced thus far. I believe however, that in a great proportion of cases, in which diarrhea sets in, accompanied by tympanites, that it is indicative of ulceration.

With regard to the other changes that occur, there is little uniformity. The spleen in many cases will be found enlarged and softened.

In many cases the mesenteric glands will be found more or less enlarged, containing a small quantity of pus.

Perforation of the intestines sometimes

occurs. but this is a rare termination. Nor is le-
sion of the brain very common, though from
the symptoms present during life, one unacquain-
ted with the disease, would suspect it.

The mortality of Typhus varies with the
season and location. In some seasons, one
case in five or six will prove fatal; in
others not more than one in fifteen.

Treatment. We now come to consider
the treatment of this disease. And were
I called upon to select a subject con-
nected with medical science, about
which there is the least unanimity of opin-
ion among physicians, I know of no one
I should take in preference to this. By
one class it is regarded as a disease of
debility, requiring stimulants throughout
is whole course; another class mentain
that it is inflammatory in its character,
and accordingly have treated it, in its first
stages, with antiphlogistic remedies, resor-

ing the stimulants for its last stage. Though I am opposed to pursuing a uniform plan of treatment, in every disease, under all circumstances, yet I must be permitted to express my preference, in this disease, for the evacuant plan. Not that I do not believe stimulants may be required in some cases sooner than in others, but at the onset of the disease. I believe them to highly pernicious.

In accordance then, with this plan, I propose first to consider when, and to what extent bloodletting should be practised. Venesection, if practised at all, must be employed at the commencement of the disease, before the powers of the system are prostrated. During the last stages, it is not required, but on the contrary, would be highly injurious. At this time, the application of a few leeches to the part suffering from local inflammation, will suffice.

Venection then should be confined to the first stage, or rather the inflammatory stage of Typhus; and the circumstances under which it is to be employed are these; the suddenness of the attack, and the violence of the inflammatory symptoms, in a person of plethoric habit, previously enjoying good health. If when called to a patient, for the first time, I should find him with a hard and frequent pulse, hot and dry skin, flushed face, severe headache, and of plethoric habit, I should not hesitate to open a vein in the arm and let the blood flow, until a decided effect on the system had been produced, as manifested by a mitigation of the symptoms. This is the extent to which I should carry venesection in this, as well as in every other affection. I do not believe in the doctrine of bleeding by ounces, otherwise than that it has an evil tendency; and if a practitioner is to be governed

by the number of ounces, rather than by his own judgment, let him abandon the practice of physic and turn his attention to something for which he is better suited. ✠

We have supposed a case which required venesection. We have now to consider what is to be done in case it be not deemed necessary and also after it has been employed. In either case, the treatment should be the same. An emetic of Tart. Antimony, or Ipecac. as will best suit the particular case, should be administered, for the purpose of evacuating the contents of the stomach. The bowels should be operated on by mild cathartics - such as calomel and castor oil, with the view to evacuate their contents and nothing more. When this has been accomplished, I believe purgatives to have done all they are capable of doing towards the cure of the disease.

The next indications are, to moderate the action of the heart and arteries, and to excite the

action of the Skin. The medicines upon which I should rely for the accomplishments of these ends, are Tart. Antimony and Nitre.

Conjointly with the above medical treatment, the patient should be supplied with fresh air, and his bed covering should be sufficiently thin, or thick, as circumstances may require, to render the patient comfortable. His body should be frequently sponged with vinegar and water, or clear water, either cold or tepid, as may best suit the individual case.

The above course of treatment adopted, the practitioner has little else to do than wait their effects, and watch every symptom, in order to detect the first traces of local inflamation; and as soon as he discovers symptoms of its existence, he must direct his remedies accordingly. I have already said that it attacks most commonly the lower part of the ileum, and that its existence is known by tenderness in that region, and diarhœa. As soon therefore as these

show themselves, leeches should be applied, and minute doses of Calomel, Ipecac, and Opium, administered. ~~After~~ After these means have been used, injections of starch and laudanum may be given, if the diarrhea be very profuse.

But, notwithstanding we have used all the means in our power to check its progress, the disease in, many cases, goes on with little abatement to the third stage, or that of collapse. This is the time for stimulants. The patient must now be supported until nature can have accomplished her work, or he must inevitably sink.

But there are certain points by which we should be guided in the administration of stimulants; for it will not answer to give them in every case that may simulate ~~inflammation~~ prostration. Were we to be guided by the pulse alone, in many cases we should be deceived, for the pulse may be feeble, and the heart at the same time beat with

a strong impulse. In our efforts, then, for to determine the practicability of giving stimulants, we should examine the heart; and if that organ beat feebly, as well as the pulse, it is a good indication for their administration. We should commence with small doses, and watch their effects. And if the pulse become fuller and slower, the impulse of the heart stronger and less frequent, the skin and tongue more moist, the breathing less frequent, and the patient less inclined to restless ness, we may persist in their use; but if the opposite of these takes place, stimulants are contra-indicated, and should be withheld.

I have now concluded what I designed to say on Typhus fever of New England, except the treatment during convalescence; and on this part of my

subject. I have nothing further to add under them that the physician should be governed by general principles, and not by any uniform plan of treatment; by his own judgment, and not go to books for that which he alone should know, and which, if he does not know, he must learn by experience

An Inaugural Dissertation

on

Variola

Respectfully Submitted

To the

Examination of the

Provost Regents and Faculty of Physic

of the

University of Maryland

For the

Degree of

Doctor of Medicine

by

Henry P. P. Yeates

of Maryland

March 1845

There is no class of diseases calculated to spread so much terror through a community as that of exanthematous fevers. These are generally diseases of childhood, but often attack adults, and extend themselves with great rapidity, from one family to another, until all are affected who are susceptible of the disease, — they are also frequently severe, in their character, running through certain stages in defiance of all Therapeutical remedies, and sometimes assuming sudden changes, so that it will occasionally happen, that the Physician leaves his patient with the confident expectation of his recovery and will be summoned again in a few hours, to witness his dissolution, — as they leave the simple and put on the malignant form in a short space of time. these diseases too are of more frequent occurrence in the male than in the female, possibly because the former is more frequently brought into contact with the poison — They are all of contagious character, or at least supposed to be so by a large majority of the profession, though in reference to some of them it is denied by a small portion of medical men, as for example

some deny the contageous character of Scarlatina, a desease of dreadful mortality among children, and the contageous nature of which seems to me to be established beyond a doubt— the diagnosis, in deseases of this class is always difficult until the eruption appears when it is comparatively simple and easy, and a physician of discretion will never give a positive opinion, until this occurs if it is known that a contageous desease is prevalent, the Physician should make enquiry if the patient has been exposed to it, and if so, this would in some measure, enable him to form an opinion, but not with any precision for the patient may have been exposed, and yet affected with another desease, even if the primary symptoms should be the same, and this I deem of importance that no physician should depend upon another, in the diagnosis of any case of desease, if it should be incorrect, the attending Physician will incur all the censure, and it is better under all circumstances, to form your own opinion, upon a careful examination of the symptoms presented, and the circumstances which may at the time exist— the Physician should be careful not to

propagate the disease, and to prevent this, extreme cleanliness is necessary, sometimes change of clothing &c &c, fumigations with sulphur has been by many recommended as a means of destroying the contagion. Whether it possesses much or any efficacy in this way I am unable to say.— Among the exanthematous fevers is classed Small pox, or Variola, a disease of which I shall more particularly treat.— This is a most loathsome and distressing disease, and had prevailed to an alarming extent in Great Britain, and the United States until the discovery of a preventive, in vaccination, which has disarmed it of most of its terrors, it may be communicated by contagion or innoculation and by the latter its severity is generally greatly mitigated. Variola has been divided into several types or forms,

1st. That which is known to the profession as distinct Smallpox, wherein the pustules do not touch or run into each other,

2nd. That form in which the pustules run together, so that each one cannot be accurately defined, called Confluent Smallpox.

3d. Malignant or Congestive Small pox in which we have Congestion of some Organ. — Variola appears most commonly about the 12th day after exposure &c. Some genral Symptoms characterise all these varieties, they all have what is termed an initiatory fever, and this is preceded by chill or rigour of considerable duration, frequently from 1 to 4 hours. The patient complains of Head-ache pain in the back and loins, and also in the extremities, when the chill passes off, it is succeeded by all the phenomena of fever, the pulse beats more quickly, the heat of the surface is increased, thirst also takes place, and the tongue probably becomes furred &c. this initiatory fever precedes the eruption, and continues from one to two or three days the patient often complains of pain in the Epigastric region, — the eruption generally makes its appearance, first on the face, neck, and upper extremities, and lastly on the lower extremities — the full development of the eruption requires from 2 to 4 days, and in Children, convulsions often take place; the first appearance of the eruption very much resembles a flea-bite and feels as if a small shot was placed under the fingers. the pimples are

partially grouped together, and after the eruption, the pa
tient generally feels easier, about the third or fourth day
the pimples contain a secreted lymph, or in other words
become vesicles, - the surrounding skin is inflamed to some
considerable degree, but the most characteristic symptom
about the vesicle, is that in the course of a few days
it becomes depressed in the centre, commonly from the
3d to 4th day, as the vesicle becomes more globular, the
central depression disappears, nor does it occur at all
in every vesicle, but in a majority of them, - the vesicle
burst, and discharge the lymph, or they become pustles
that is to say, pus takes the place of the lymph with which
the vesicle was distended, either by absorption of the lymph
and new secretion or the lymph becomes converted
into pus, and a central depression is also found in
the pustule; this change commonly takes place between
the Sixth and Ninth day of the disease; these pustules
break and the pus is discharged generally 2 or 3 days
after maturation and the process of scabbing com
mences after a few days the scabs fall off leaving
a pit which in my opinion is caused by the slough -

When the eruption commences in the face it is attended with swelling, and in distinct small pox, the swelling generally subsides after the eruption is complete, so in other parts of the body — Variola is also generally attended with more or less inflamation of the throat, but it is not generally so severe in the distinct as in the Confluent form, yet in all cases attention should be given to this symptom, lest the inflamation should extend to all the air passages. — in the mouth we often see yellow spots scated in what appear to be pustules, and whenever these spots are seen the case is generally severe, — during the eruption the tongue is usually furred, when the eruption is finished it is less so — An important symptom is pain full tenderness to the touch, especially in the palms of the hand and soles of the feet, the eruption is also attended with much itching; when the eruption is completed on the skin we often have a degree of salivation which is owing to irritation of the mucous membrane of the mouth and fauces about the same time also, the fever measurably subsides frequently however secondary fever occurs, and this generally about the period of maticulation, from the 9th to 11th day —

in the confluent form, all the precursory symptoms are more severe; the chill is of longer duration, the initiatory fever is considerably higher, the pains of the head, loins, and extremities continue longer, and are more severe also, the eruption appears as in distinct form, but the vesicles run into each other, the swelling in the confluent does not subside when the eruption is completed but continues during the whole period of the eruption, and the throat is always affected - Ophthalmia of a violent character often takes place, and the secondary fever is sometimes severe enough to cause death - The malignant form of Variola is that in which we have organic congestion, and no secretion of pus, but instead thereof a turbid red looking fluid - cold skin, inflamation of the bronchia weak respiration, and a leaden hue of the skin &c, the pulse is feeble and fluttering and the tongue pumice dry -

To the three forms of diseases above mentioned, some add a fourth viz that called Variolois, which occurs some times in persons who have had the Variola, or who have been vaccinated, this is generally of a very mild character, yet if a person who has never had the vaccine disease, or smallpox should be exposed to one laboring

ing under Varioloid, he will be liable to Variola, in any of its forms - There seems to be but little difficulty in reference to the Pathology of this disease, it consists in the pustular eruption of the skin, and inflamation of the mucuous membranes of the fauces, pharynx larynx &c and often extending to the most remote ramifications of the bronchial tubes, and air passages, The former lesion is found in all cases of the disease but the latter not invariably - it is found that in Smallpox as well as most contagious diseases, the system is more liable to imbibe the disease than at another - This disease can be communicated from the time of the eruptive fever, until the scabs have fallen from the body, indeed it may be communicated after death, for the reason that the scabs contain the poison for a great period of time - The poison is very volatile, and quickly diffuses itself through the atmosphere - Season appears to have some influence over this disease, it being more common during the cold than the warm weather - It is often communicated to the Foetus in Utero who is born with the disease, and sometimes without being exibited in the mother, who may not be sus

ceptible to its action, or may be protected by having
the desease previously. — Vaccination is generally
considered a prevention of this desease, insomuch that
innoculation is for the most part abandoned, yet it
might be practised to test the efficacy of vaccine
desease, or should it be impossible to obtain vaccine
virus at a time when Variola was prevalent, innocu-
lation could justifiably be resorted to, as it generally
produces a much milder form of the desease.

Treatment

What we have said of contagious deseases generally, is
true of Small pox viz, that it will run through a
regular course in defiance of all medical treatment —
in the distinct form we may give a saline cathartic, so
soon as we are satisfied in reference to the diagnosis
for there is generally costiveness throughout the whole
course of the desease, and the salines are less irritating
than the drastic purgatives — we may prescribe cool
drinks, as lemonade &c and allow the patient fresh
air: though it should not be allowed to enter in a
draught for fear of producing chillness, which should

always be avoided. and this will generally carry the patient in safety through the milder forms of the disease - it often happens that too much is done, and from our anxiety and too much treatment many die who under other circumstances would recover it is frequently however necessary to institute more active treatment than that named above, in those of a plethoric habit of body, venesection and the whole antiphlogistic regimen sometimes become necessary persons affected with Variola, should always be kept upon a bland but nutritious diet, as arrow root, tapioca &c. harsh cathartics should be used very cautiously as they may produce inflamation of the stomach and bowels — Secondary fever may generally be subdued by aperient medicines, but if the inflamation be very violent V.S. may be practised with care —

In the confluent form an active treatment must be adopted at the beginning, for the fever is highly inflammatory, and an active treatment during the initiatory fever is thought sometimes to have converted the confluent into the distinct form of the disease - if V.S. be

necessary the pulse will indicate it, a hard and rapid or small and hard pulse will bear the use of the lancet. the skin should always be kept cool by sponging the body with tepid water, or as warm as is agreable to the patient's feelings – he should never be chilled – there is always more debility in the confluent than in the distinct form of the disease, and sometimes it becomes necessary to administer Stimulus; the bowels in this as well as the distinct are generally costive and here also saline cathartics are most beneficial. stimulating tonics are often used in this disease with the most happy effects, when the strength of the pulse has fallen and the powers of the patient sunk.

In the congestive or malignant form of Variola, the patient as we have said before exibits weak respirations, a blue or leaden hue of the lips, a feeble pulse, dry furred tongue &c. when these symptoms exist, an extremely cautious plan of treatment must be pursued – We must be particularly careful that the body does not become chilled. but rather

warmed, so as to bring about reaction; in some instan
ces where the surface is below the natural temper
ature, the warm bath is found very beneficial, so
also the stimulating tonics, - they must not be used
however so as to raise the skin much above its natu
ral temperature — the bowels as in all other forms of
the disease must be kept open by saline cathartics
though they must here be exibited with more caution
than in the other forms, and a bland, nutritious diet
is always necessary - When the disease is produced
by inoculation it is generally milder, particularly
when the proper precautions have been used in prepar
ing the system for it, such as the moderate use of
aperient medecines and light diet, and in this
milder condition little else is generally necessary than
to keep the bowels open, permit the admission of fresh
air, and give light nourishment as Arrow root, tapioca
or gruel - under this regimen the patient will gener
ally recover; if more severe symptoms should arise
they must be met by the treatment already mention
ed as applicable to the more aggravated cases of the

desease

The Varioloid desease will also usually yield to the mild treatments above mentioned To prevent pitting which is a frequent consequence of the desease some Physicians recommend the patient to be kept in a dark room, others smearing the face with Mercurial Ointment on the 2d or 3d day of the eruption - several other methods have also I believe been recommended, but with what success I am unable to say.

It may be as well to say, that if it should ever become necessary to practice innoculation, the skin should be clear of all eruption - The Prognosis of Variola, taken as a whole is unfavourable, but it is generally favourable in the Distinct form, as well as the Innoculated, and Varioloid - in the confluent, and Malignant forms, it is certainly very unfavourable -

The preventives of Smallpox are very few, but so far as known, generally safer than the preventives of any other desease, and at this time every one avails

himself of them, one of which is carefully to avoid exposure to the contagion — the other and best security consists in Vaccination, a process discovered by Jenner. as it was by chance, he discovered that those persons who attended to the milking of cows, and whose hands were made sore thereby, were not liable to Variola, which prompted him to make some experiments upon the subject, and these resulted ultimately in producing the conviction among medical men generally, that Vaccination is the best and only sure method of arresting the ravages of Smallpox — There is but one disease for which Variola can be mistaken, and that is Varicella, or as it is termed Chicken pox, and a little attention will be sufficient to enable any man from confounding these two diseases, or mistaking the one for the other the Vesicles in the latter never contain pus as they do in the former, nor does the central depression exist which is so characteristic of the Smallpox.

An

Inaugural Dissertation

upon

The Autumnal Fever

of

Dorchester County Md.

Submitted for Examination

to the

Provost Regents & Faculty

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

William L. Wingate

of

Cambridge Maryland

February 1845.

In
Acknowledgement
of his
Talents and Skill
as a
Practitioner of Medicine
his
Exemplary Character
as a
Private Citizen
and
Benefit accrued
from his
Instruction
this Essay is respectfully
Dedicated
to
Thos Sy. Sandy M.D.
of
Cambridge Md
By his sincere friend and Student

Introduction

My "Native County" or some portion of it is annually visited by a Disease known to its inhabitants by the name of Bilious Fever.

From Childhood to the present period of my life I have had the privilege of seeing this disease in its various forms - have long been, in some measure acquainted with its usual symptoms and common mode of practice.

Within late years however having been called to the study of Medicine and on many occasions during that time having attended under the instruction of my Preceptor to the disease from its development to its exit, my acquaintance with it, necessarily has become more exclusive - which

will go far to confirm the remarks contained in this dissertation and enable me to submit them to examination with a greater degree of confidence than I could, possibly, have felt upon any other subject.

But, Gentlemen, it must be apparent to you that for the further investigation of this or of any other disease - more research than I can possibly make, - more experience and observation than I have ever enjoyed - and more reflection than I can command are absolutely necessary, and for more undoubtedly than belongs to many of my superiors, - but it is a source of pleasing consolation to know - and I have ample apology from the consideration of the fact, that it is my duty.

The investigation of any subject

is laudable and connected as many by some kindred tie to every thing within the province of nature it is of common interest to the human family.

But the minute investigation of a subject is the only means of affording any rational deduction from the moral phenomena presented by and belonging to it and consequently the means of conferring the greatest benefit upon those especially interested in it.

Nature, known, determines the amount of benefit as she determines the success of an individual in any intellectual exercise by the strength and amount of the talent and industry with which she may have endowed him.

Not having been very mindful of me in this respect I do not

therefore premise you and you need not expect to meet with any rare fruit in the following pages - and in justice to truth and honesty al-low me to remind you that you will meet with nothing more perhaps than you have long since partaken of and digested.

An examination of causes & effect - an accurate discrimina tion amid the irregularities of a disease and a proper reference of each phenomenon to its proper ante-cedent is a task which I can not perform - it is one which dis tinguishes and more properly belongs to men of genius.

It is a source however of great pleasure to know and to have the present opportunity afforded me to acknowledge that such men

have been my instructors, and with gratitude to confess that I live in an age of Medical Science whose atmosphere has long since been pierced and illumined by the intellectual rays of such men - her ardent votaries - Who have dissipated in a great measure the clouds of ignorance and superstition - eclipsed with the splendor of their acquirements and consigned to oblivion the names and dogmas of many of the bright luminaries who shone conspicuously in the literary galaxy of antiquity.

It is likewise a source of great exultation to know that the result of the efforts of those who are now engaged in the medical department of Science has been such as to encourage them

to an extinction of their labors and
invite us to cooperate with them in
the removal of what remains in error
and uncertainty

By them has been effected the
proscription of many of the false
theories - unreliable analogies and
ambiguous practices which governed
Medical men in time past and are now
nearly forgotten

Instead of reading the
pathology of a disease in the char
acter presented only by its external
appearances - we are now taught
to examine symptoms more particu
larly with regard to their rela
tive connection with and dependence
upon morbid conditions existing
within the system and consequently
to form a foundation upon which to
establish a more correct system

of medical practice,

"Etiology."

A knowledge of the causes of events and an acquaintance with the mode of the operation of those causes is a consummation greatly to be desired by every lover of science, and in no art or science is it of more importance than in that of Medicine — for only when results thus obtained can a rational and successful practice be predicated.

If we ascertain the cause of a disease we may be said to have ascertained in a great measure the means of its cure.

But although we may arrive at a correct knowledge of the cause of our Autumnal Fevers still many from necessity will be constantly within the sphere of its influ

-mon and liable at any moment to
become a victim to its ravages.
Since it will appear evident that
it is of the utmost importance to the
medical practitioner that he ascertains
as near as possible the manner and
result of its action - for upon the facts
thus obtained, connected with experience
and observation is to be founded the
principles of his treatment - without
which all interference on his part
would be empyrical, and, unless
by accident, grossly injurious.
The topography of Dorchester
County corresponds in so many particu-
-lars with those districts of country
described by Authors in which an agent
known by the name of "Miasma" is said
to produce those Autumnal Fevers that
I may with confidence assert that is
the main, if not the sole cause, of our

Autumnal fevers of Dorchester County.

What this invisible - impondrable - subtle - but noxious agent and destructive agent with which our atmosphere is infected is, the ingenuity and research of Medical philosophers have never as yet been able satisfactorily to determine.

Doctor Cartwright of Natchez is throwing light upon this subject indeed to establish a material difference between effluvia and miasma.

He says the former are nothing more than the decomposed bodies themselves and that they are as innocuous as the bodies of which they form a part.

Nature then further analyses these particles and separates them into the atoms of which they form a part. are compound, and that these atoms under the influence of ordinary circumstances enter into to combinations which are harmless, but under

peculiar circumstances viz temperature moisture &c. they enter into combinations diffent from those of ordinary circumstances and form what is considered malaria or miasma. The process by which malaria is generated is called malarious assimilation

That it is not merely decomposition of matter which produces disease but the combination of decomposed particles taking place under peculiar circumstances and furthermore that the malarious assimilation acting under different circumstances produces different kinds of malaria and those different kinds produce different diseases. For example, the malarious assimilation in the vicinity of a marsh - the effluvia thrown off the marsh having the atoms into which ~~not which~~ they are separated combine anew by it produces that kind of mi

-amata which cause Bilious Fevers.

The greater number of men known by far who have written upon the subject entertain quite a different opinion.

They say or define miasma to be a vapor suspended in the atmosphere.

Wilson Philip Vol 1 page 82 says that miasma is the effluvia together with the moisture of marshy grounds and this is all we know of it.

Dr Dr Chapmans Journal Vol 8 page 364. has concluded from his experiments that miasmata are the particles of putrid effluvia suspended by aqueous vapor in the atmosphere.

Others say as science discovers no gas, to which this febrile effects of miasma can be attributed — the vapour dissolved in the air must be the media by which the putrifying particles under the air operations,

Many circumstances can be adduced in favor of this opinion. Minds from a dry region have been known to less pend or remove the endemic, while those of a moist kind have increased it.

Now a vapour is a solid or liquid substance converted into an elastic fluid ~~and~~ by the agency of caloric and is nothing more than the minutest atoms of that solid or liquid removed beyond the laws of coherent attraction.

Doctor Carbrought says these atoms are innoxious as the bodies of which they form a part.

The advocates of the doctrine of vapor say they are the agents in producing disease. Which of the two theories is correct I shall not attempt to decide.

The deleterious effect of marsh measmata upon the human system has

hum supposed by some to depend upon an abundance of oxygen,

For instance some medical philos-phers after repeated examinations assert they have found many parts more of oxygen in the stagnant air of marshes than was found in air untainted by such localities,

Others with perhaps better faith have supposed it to depend upon the presence of Carbonic Acid or Hydrogen Gas.

They have given us as the result of their experiments that lime water exposed to the action of an at-mosphere supposed to contain miasma has resulted in the deposition of Carbonate of lime,

Carburetted - Sulphuretted and Phosphuretted Hydrogen and Nitrous ox-ide Gas have each had their respec

-tive advocates for being the deleterious a-gent existing in the atmosphere of mia--matic districts.

No conclusion can with propriety be drawn from any experiments that have yet been made. The subject is certain-ly and truly a mysterious one, and it is wonderful that men of equal in-telligence - opportunities and skill should arrive at such various and opposite conclusions, for indeed almost every known deleterious gas has been reputed to exist in the atmosphere of malarious regions.

The existence of marsh miasma no doubt has been from time immemorial - coetaneous with the first decomposi-tion of vegetable matter.

Many ways ancient as well as modern have been written upon the subject for which these authors have

obtained credit for but little more than this erudition and ingenuity.

From all that we can learn upon the subject it appears that heat, moisture, animal and vegetable remains, acting together in certain proportions together with a certain quantity of air are the necessary agents for it production.

Without a sufficient degree of heat, putrefaction cannot go on, Diseases therefore depending upon this cause are confined to warm climates and generally to warm seasons.

Winds from the North during the prevalence of our Fever render it milder and when first appear they totally disappear owing to the bracing influence to the decomposition of vegetable matter.

Moisture also acts an important part in the process of decomposition, but

it must be in due quantity. A deficiency is unfavorable as it is often remarked that men are but little troubled with the fever during any but seasons of the autumnal fevers in which it usually occurs.

Draining marshes perfectly dry have been known to eradicate its virulence and in a few instances that could be mentioned in the County to prevent its generation or at least the people escape the disease which which they are annually visited.

An excess of moisture is equally unfavorable to the putrefactive process. Miasma is not generated or the effects of it are not manifest upon individuals residing near marshes completely inundated and it produces or at least dissipates its consequences often suspended during rainy ~~that~~

leaves that would set in after the mi-asma has been known to have been evolved.

It is a well known fact that the Citizens of Cambridge and other parts of the County living upon Rivers and Creeks remain comparatively healthy until the grass growing upon the bottom of those Rivers and Creeks is exposed by a continuity of low tides which is generally the case about the first and middle of September.

From this fact we are enabled to answer the question that has been frequently asked — why is it that persons living at the mouth of those Rivers are attacked with the fever much later and when attacked, much more violently than those at or near their commencement.

The heads of Rivers and Creeks

are much more shallow and consequently the vegetation upon them is oftener and more constantly exposed to the action of the Sun's rays.

The violence of this fever is to be attributed to the concentration of the malaria during its transition in the atmosphere from the place of its generation to the mouth of the Rio — the concentration being effected by the presence and union of the miasma generated between these two points,

The same may be said of our swamps - ponds and other places which in wet seasons are covered with water — putrefaction in a great measure is prevented from taking place, and disease does not siege hold of persons residing within this vicinity.

It has been stated by Authors that the decomposition of vegetable re

mains in company with that of animal causes a much more deleterious miasma.

I have certainly known this to be the case in many instances in our County especially during the Autumn of 1843 in the Village of Church Creek and its vicinity

During the Summer of that year many farmers in the neighborhood and persons who cultivated small lots in and bordering upon the town hauled upon their land a large quantity of Oysters for the purpose of enriching the soil.

About the last of August these Oysters began to decay and during the month of September and part of the succeeding month one of the most violent forms of the Fever spoken of raged upon the people in that

district that ever was known to occur, - destroying in the space of a few weeks upwards of fifty lives - out of a population of not more than six hundred and fifty, and in many places or families scarcely one escaping an attack of more or less violence.

As to the peculiarity of soil acting in the production of Miasma nothing can be said perhaps of the soil of Dorchester County, although in many parts it does possess that peculiarity.

The kind of soil concerned in its production is said to be of a rich spongy nature, which permits water easily to percolate its superior strata while its substratum is hard and compact.

I do not think it can with propriety be said that such a soil is generally to be found in those districts of our County which are annually visited with an

autumnal fever. But that this Kind of Soil where it is met with, ~~it~~ is generally in the upper part of the County and other portions of it where the people are seldom troubled with miasmatic diseases.

Many other points of interest connected with the mysterious agent might be mentioned and commented upon but the want of time and the limits prescribed by custom upon an Essay of this Kind admonish me to take upon the consideration of another subject connected with the disease ~~but~~ which though bearing a more practical bearing is nevertheless not the less mysterious, viz the

Action of Miasma

upon the human system. To explain the "modus agendi" of miasma in the causation of disease I will without his

-itancy and with the least possible re-luctance declare my utter inability and if it be any consolation to know that I am not alone in this respect I know I am sure all that I could desire- For so far as I know him a-le to ascertain no one has ever yet attempted with any de-gree of satisfaction to minutely and definitely explain the proces of morbid action in the system from the introduction of malaria until a paroxysm of fever was induced,

For many reasons, the mode of which I will endeavor to explain I have thought in company with others (if this company I may be allowed to say) that it acts upon the Brain and nervous system and that the effect of its ac-tion is either debility or a diminution of nervous energy.

When an atmosphere charged with miasma is inspired it comes in contact with the mucous membrane of the Lungs - a membrane which is many times greater than the whole surface of the Body.

This membrane is interwoven with numerous nervous filaments derived from the Pneumo Gastric - Thoracic and Cervical Plexus of the great sympathetic

The noxious miasma having been inspired and brought in contact with this extensive Pulmonary - Bronchial - or Gastro Pulmonary membrane may act in either of the three following ways.

First

The miasma by impinging upon the nerves spread out upon the mucous membrane the lungs may exert

a deleterious influence by directly diminishing the excitability of the Pneumo Gastric - which reduces energy may be communicated to the common sensorium - the centre of nervous influence and induce a partial atony in that Organ.

The fibres of this Organ being thus depraved - the nerves connected with it and ramifying upon and among all the Organs of the body necessarily partake of its derangement, and are rendered unfit for exciting in them those degree the Organs to which they are distributed, consequently there is a struggle in all the movements of the animal economy. - the heart and blood vessels undergo an impairment of power in circulating the blood - the surface and extremities by reason of their remoteness do not receive their usual supply of the vital

fluid - it admits therefore in the great vessels and organs in the centre of the system. Congestion then takes place and for want of action in the surface a chill is the necessary consequence.

Second

Miasma by its action upon the nerves of the lungs - producing a diminution of their energy. they are disabled to excite the influence they are known to posess and exercise in the transformation of venous into arterial blood. The blood consequently which returns through the pulmonary veins to the heart in a state of imperfect arterialization - it cannot therefore impart its usual stimulus to the walls of its cavities - its contractions are thereby rendered less vigorous and effectual and the

same condition of circulation occurs and the same pathological phenomena is developed as in the first.

To this debility in the action of the heart and the whole sanguiferous system is to be added that which is caused by the interruption of the brain and the whole nervous system from the deleterious influence which blood in a state of imperfect actualisation is known to exert upon them.

Third

It is a law in physiology that the pulmonary veins absorb the same as other veins and transmit to the heart the substance which may be in contact with the spongy tissue of the lobules of the lungs.

Now miasma by being inhaled into the lungs may first exert its

debilitating influence upon the nerves of its membrane and thus be absorbed by the blood vessels ramifying upon that membrane - it carries into the circulating mass of blood, and by being diffused through every part of the whole system it is brought into immediate contact with the brain and nervous system and thus by its immediate presence may produce that condition of things observed in Fever.

We may infer therefrom from what has been said that miasma may act first upon the nerves of the Lungs - thence by sympathy upon the Brain and through the nerves distributed from the Brain upon every part of the system.

Second - That it may act first upon the nerves of the Lungs - thence

upon the mass of blood and finally through the blood upon the whole system.

Third — Miasma may act primarily upon the nerves and by being absorbed by the Pulmonary vessels may act upon the whole system.

Some suppose the blood to be imperfectly oxygenized on account of a deficiency and others to be too highly oxygenized on account of a superabundance of oxygen in miasmatic atmosphere.

Others say there is an imperfect decarbonation of blood by reason of the superabundance of Carbonic acid gas in the atmosphere of a malarious district.

They mention in support of this theory the fact that the blood drawn

from the arm of an individual laboring under a miasmatic fever is much darker than that taken from a healthy individual.

It is my opinion in comparing such cases whether the impression be made through the blood or upon any part of the Gastro Pulmonary membrane – viz – the membrane lining the bowels, lungs or Stomach or whether it be made upon the skin a certain affection of the nervous system constitutes the first link in the greatest majority of cases in the chain of morbid action.

The already extended length of this essay will not allow any further prosecution of this subject, and necessarily limit in a great measure what can be said upon other points

of interest. I wise therefore after mentioning a few of the exciting causes of our Autumnal fever conclude what I have to say upon it by giving a short history of its Symptoms - Diagnosis and Treatment,

Exciting Causes.

The effect of the action of miasma upon the system we have ascertained or considered to be that of debility.

An individual however may continue under its influence in the pursuit of his usual vocation, for days - weeks and even months and he may escape entirely an attack,

Many however who thus escape will be frequently during the sickly season conscious of a degree of lassitude and an indisposed to

pursue with usual avidity and activity their common employment.

The digestive powers will be in a state of somewhat impairment, - in appetite more or less affected - bowels more or less irregular - with a tongue slightly furred and of a disagreeable taste.

Many times in order that a person thus effected should have the pain it is necessary that he should be subjected to the action of an exciting cause.

He may be exposed to the action of cold and wet, he may be guilty of an excess or some irregularity in diet, the powers of his mind may be exercised upon a subject of a depressing nature, such as embarrassment in business - the sickness or death of those around him, he may

exercise to too great an extent the motive powers. he may be guilty of other irregularities or he may be exposed to a very highly concentrated action of the specific or determining cause.

He may be effected by the premature administration or the action of a cathartic.

It is not at all unusual for individuals in our County who are exposed to or live in the regions of miasma when during the sickly season they feel somewhat indisposed and many times it is only imaginary. to take fifteen or twenty grains of Calomel and work it off with Castor Oil

Nearly every stone house in the County is loaded with nostrums or specific quacks endorsed with an

immense number of certificates
pretending to give a death blow to the
disease with one fair stroke; the
consequence is many who are credu-
lous enough to believe any thing
without asking for its credentials or
questioning its source - are influen-
-ced to resort to their virtues and
thus in many instances bring a-
-bout a condition of things more
than they sought to remove.

Symptomatology

Disease being an abnormal con-
dition of the system we are enabled
to recognise it by the appearance of symptoms
not to be found in a state of
health. The cause and peculi-
-arity of the symptoms determine the
nature of the disease and distin-
-guish it from those with which it

~~fever then with which it~~ may seem to have an affinity.

Our Autumnal Fever in consequence draws its character from the symptoms which mark it in its development and progress.

It is intermediate to that of a Continued and intermittent fever having some affinity to the former on account of them being always present some of the conditions of pyrexia - but it is more akin to the latter on account of its being developed from the same cause and of its (but) characterized by an intermission of some perceptible duration once in twenty four or forty eight hours.

It is a disease which seldom occurs without more or less prascursory indications - being usually pre

-ceded with alternate sensations of cold and flushes of heat, yawning and shuking - loss of appetite and for many days a bad taste in the mouth. - furred tongue - lassitude - oppression and other symptoms indicative of an unhealthy and ~~abnormal~~ unearny condition of the system. Such as head ache, more or less violent - ringing in the ears - sometimes a confusion of vision complained of - - dejected countenance - tightness across the breast - pain in the right or left hyperchondriac region - with aching pains in the back - upper and lower extremeties - Epigastric tenderness if not always obvious generally made no by pressure. Nausea followed by vomiting which generally consists of bile. Griping and inactive bowels the faeces generally

containing an admixture of the same,

Then symptoms increase in intensity until the disease is fully developed which consists in an aggravation of many of the symptoms just mentioned — continuing for some hours until a gentle sweat comes on and with it an alleviation or an entire relief from many of the symptoms.

This state of things which we call the calm state remains for some appreciable time and then there is a renewal of the fever — generally preceded by chillness.

There is seldom a period of complete apyrexia but many of the conditions of fever — such as elevated temperature — quick and irritable pulse — giddiness weariness and thirst being generally present,

The disease thus progresses until conquered by nature or art or death in spite of the respiratin powrs of the former or skill of the latter closs the scene by terminating the life and rack it the sufferings of its unhappy victim.

Should convalescence take place it is usually preceded by what is considered a critical discharge — with a decided intermission and abatement of most of the febrile symptoms.

Should the urine be the case the calm state of the disease will become so slight as to be scarcely distinguishable: — the fever burning continuous and uniform in its course — the exacerbations more violent and the whole elements of the disease more grave and alarming.

A yellow hue transfuses itself over the surface which is hot, dry, and rough to the touch. The face burns red and

swollen, the eyes inflamed and manica-
-cal. the pains in the back and extremi-
-ties become so severe as to force from the
patient shrieks of anguish and language
of despair. A yellow, black, or brown
covering is found upon the tongue - the
abdomen tender to the touch and the
bowels flatulent. If discharges take
place they are generally watery and
foetid. Finally, the senses become im-
-paired as well as the power of speech.
Deglutition is painful or difficult. the
pulse which throughout the disease is often
found soft and but by any means in-
-dicative of danger becomes depressed
and small - Cold sweats break out - the
respiration becomes anxious and difficult
and the patient sinks into an irretri-
-evable coma, or life terminates in con-
-vulsions.

The symptoms which have just been enumerated may be said to be such as are most generally observed in this disease.

But inasmuch as the disease, owing to many causes, becomes modified in its appearance or as is frequently the case becomes complicated with secondary inflammation, it may be well perhaps to notice these modifications as well as some of its most common complications.

This form may justly be styled one of Protean form - occurring from the mildest to the most malignant - but nevertheless we view it as the same disease and only produced by the same cause operating under modifying circumstances to produce modified effects. And although we do now and then meet with a patient, affected with either of its forms after the circumstances are removed which

generated its specific and determining cause viz after frost and during winter but it is nevertheless the same disease produced by the same cause as in Autumn but which has been lurking in the system - maintained perhaps by a vitiated state of the atmosphere - damp cellars and various other local causes in propinquity with the patients dwelling.

The most common modifications are then styled by us Inflammatory and Congestive.

Inflammatory

If at the commencement of the disease or during its progress, we discover an increase of vascular activity. if the skin becomes more dry and its temperature more elevated, dyspnoea more difficult, and anxious imparting to the countenance an expression of anxiety and alarm - with

great fulness and unarimess. If the pulse is found more hard and corded or more full - strong and quick - the thirst more urgent the tongue more dry and foul - the headache more severe with redness and suffusion of the face - if such symptoms as these be present which consists in an increase in the gravity and activity of those belonging to the more simple form we recognise the disease as having assumed that form styled by our practitioners of medicine the Inflammatory Bilious Fever.

Congestive

The congestive forms differs from the two which have been briefly defined in several particulars

The action of the heart and arteries is less violent, the pulse being slow - indolent and unresisting.

the head confused and painful - giving to the patient a sensation of oppression. The mind is stupid or indifferent - vision rather indistinct - the countenance flushed and of a purple color. The stomach somewhat irritable with occasional bilious vomiting but not evincing the local complaints of in the region of the Epigastrium. The sensibility of the surface as well as the temperature is greatly impaired, and the patient feels oppressed - nerves and depending on account of the congested condition of the viscera.

Having thus very briefly mentioned some of the peculiar diagnostic symptoms of the most common modifications of the Autumnal Fever I will next in as brief a manner mention a few of those symptoms which I

have been taught to regard as depend-
ing upon secondary inflammation

The parts most liable to suffer are
the Gastro Intestinal tube and Liver,

It may be remarked introductory to
the notice I shall make of these complica-
tions - that while the state of the atmo-
sphere - the nature of the miasm and
the idiosyncrasy of the patient exert
each and every one an influence in
giving character to the form of the disease
they exert no small control in determin-
ing the seat of secondary inflamma-
tion - and furthermore that when in-
flammation attacks one part it is apt
to be transmitted to others and to excite
such vascular determination as to in-
volve others more remote - giving such
a complex and diversified character
to the disease as to render the diagno-

-sis of the seat of the inflammation al-
-most impracticable.

We judge however the "Stomach" to be involved wherever we discover unusual nausea and vomiting - great heat an incontrolable and almost insatiable thirst, the desire being for cold drinks - generally pain of a very excruciating character - hot skin sharp and small pulse - tongue of gastritis although the complication is sometimes supposed to exist when the tongue has a yellow coating. The urine is generally scanty and high colored.

If the inflammation extends lower down the alimentary canal so as to involve or become Gastro Intestinal in addition to the symptoms already mentioned another group will be developed significant of and having a

close relationship to what we might suppose to be the case under such circumstances is a great tendency upon pressure in parts and sometimes upon any part of the abdomen occupied by the intestines. There is more or less flatulence and eructation - complaint of the bad coming and in order to sustain the least possible weight nature instinctively admonishes the patient to relax the muscles of the abdomen by lying upon the back with the head and knees elevated. The discharges per rectum are of a dark color and slimy consistency. Urine turbid and yellow.

In an affection of an irritation being made upon the Liver by the complaint of heaviness - pain and tenderness in the right hypochondriac region frequently extended to or accompanied

by a pain in the right shoulder.
The sickness of the stomach is frequently very great, and attended with bilious vomiting - The skin and eyes are of a jaundice hue. Urine tinged with bile but the faces generally presenting a clay colored appearance.

When other parts participate in the mischief which is not unfrequently the case it will be attended with symptoms which indicate its existence and determine its seat.

In regard to the duration and termination of the fever I will say that the former is indefinite - It generally lasts two weeks - sometimes only four or five days and in a small proportion of cases as many weeks.

It terminates in death by syncope or convulsions. or in complete recovery per

ceded by critical discharges from the Skin
Kidneys. or in discharges of a bilious
character from the alimentary canal.

The disease may likewise terminate favorably by the supervention of the Intermittent form — Chronic disease of the Liver — Enlargement of the Spleen — some Gastric derangement or Chronic Dysentery.

Diagnosis

A sufficient number of elements are to found blended in the remarks that I have made in the description which I have given of the disease to render any further remarks necessary to separate it from a form of common occurrence and originating from the same cause as the Intermittent. The almost unbroken febrile Condition together with the perpetuity of some degree of nausea and frequent vomiting — the hypochondriac pulsation and

tendencies an element sufficiently well marked to distinguish it.

In the next place although some of the more grave cases may seem to assume in many particulars the description given of Yellow Fever yet it evidently differs from that disease in the absence of its characteristic vomit.

The mode of access is different - there being always a distinct chill of more or less gravity with a renewal of the same of more or less intensity and duration once in twenty four or forty eight hours. Furthermore we do not meet with the acrid and inflammatory bile of Yellow Fever.

Again although it often assumes before death many features resembling Typhoid Fever which is the common Autumnal fever of the New England

and many of the post mortem Middle States - yet it is obviously not that disease - differing from it in its etiology, and most essentially in its not having that cutaneous eruption which is almost universally to be found present about the second week and characteristic of Typhoid Fever.

Prognosis and Pathol. Anatomy.

The successful management of the great majority of cases by the Practitioners of Medicine in Dorchester County - connected with the great hostility on the part of the people to "post mortem" examinations have allowed me no observation of its anatomical lesions.

Treatment.

In many cases it is often found all that is necessary is to clean the Stomach and bowels by the action of an emetic or cathartic

only an emetic cathartic and complete the cure by the administration of Tonic and antispasmodic so universally prescribed in this and other intermittent diseases.

But in a vast majority of cases the prevailing symptoms are so grand in their nature and the known tendency of the disease to become complicated with Congestive or Inflammatory action in some one or other important organ of the body, is so great, that we are oftentimes compelled to resort to more heroic and continued treatment.

If there be high arterial excitement, hot skin, sharp, full and hard pulse, severe pain in the head and limbs and more especially if there be abdominal tenderness, we have recourse to those means which

have a more direct and immediate action upon the Circulatory system and the system at large, — the operation of a cathartic is too slow and insufficient — sweating if not insufficient is too uncertain — We therefore unsheath the lancet and bleed from the arm. An act which does and will result in the mitigation if not in the entire relief of many of the grave symptoms of the case —

We resort to bleeding again if such symptoms which indicate the act continue or return, Here I will mention the necessary precaution however that has been taught me by the experience and observation of others — that bleeding is to be performed with care and never carried to any very great extent even where we have positive evidence of internal inflammation, — we should aim

only to effect the morbid excitement so much that the efforts of nature may discharge the balance of the remedial act. Being guided by the pulse and existing circumstances connected with the disease and the constitution of the patient we should employ the salutary effect of bleeding so far as to assist and not prostrate the powers of Nature.

Sometimes in the commencement or during the progress of the disease we meet with symptoms which do not so expressly indicate the propriety of blood letting — but which nevertheless the experience and observation of many physicians in our County and even those of us whose practice has been necessarily limited have found to be highly useful inasmuch as great satisfaction and success have always followed the free

tico. It is in one of these cases where there is no great debility - with sighing and precordial oppression - the countenance is pale and exanguous - the surface and extremities Cold - pulse slow and indolent or scarcely to be felt,

The feeling of debility is only apparent and not real and is due as is likewise the inequality of temperature, to the great inequality of the distribution of the mass of blood. The congested and engorged state of the viscera impart the sensation of a precordial oppression and forces from the patient the complaint of exhaustion.

But if the blood although at first slow and by degrees should begin to flow more rapid and of sufficient force as to form a stream - we are admonished our remedial act

nile b of essential service.

The blood is allowed to flow until the pulse which had risen as it were from obscurity and became full frequent and somewhat resisting - is diminished in strength and frequency.

But on the other hand if the pulse at first slow should become more slow and continue to trickle down the arm we are admonished to tie up the arm and administer with a very reasonable hope of success remedies of an opposite character,

Without pursuing any further the consideration of blood letting in this disease it may be sufficient to observe that generally, if the indications to prevent which bespeak the propriety of its use in other acute affections its use in this disease need not be

questioned.

"Cathartics"

When the elements in the disease which in some respects admit the propriety of resection are not of a very grave character or when there is no great vascular activity cathartics are our main dependence, and when resection is necessary they are always resorted to in the course of subsequent treatment.

Having been generally considered and proven to be useful in proportion to the amount of bilious discharges effected by them - Calomel in consequence has long been and is now more used in this disease than any other cathartic in the Materia Medica

Its operation is more certain - less griping - more durable and by far the

most certain and effectual medicine in producing those acid bilious discharges which is so generally followed by a mitigation and in many instances an entire relief of all the unfavorable symptoms.

The safety of the patient does not depend upon the specific action of the mercurial in effecting ptyalism but upon the evacuation day by day of that dark & feculent matter with which the alimentary Canal seems to be loaded until the discharges assume a natural and healthy appearance.

In order to avoid salivation which would result from the premature administration of the medicine - it is laid aside when we have obtained the object for which we administered it - and other cathartics are employed until the discharges become more healthy.

Cases however are frequently met with in which its use continues to be indicated. When this occurs no obstacle in a great measure all tendency to salivation and effect equally as well his ious discharges by giving the medicine in combination with other cathartics,

Every physician with us has his favorite combination but the one used most frequently by my reputed preceptor consists of equal parts of Calomel Aloes Scammony and Rhubarb made into pills containing one and a grain of each ingredient.

Two or three of these pills and sometimes even one is found amply sufficient to produce two or three copious discharges in the course of twenty four hours, and with few exceptions do the discharges become serous and free from bilious

-tion occur.

If owing to the great torpidity of the bowels - fault in the medicine or some other cause - the pills do not operate we repeat the dose or give Sulphate of Magnesia or Infusion of Senna or both.

"Emetics"

From the known sympathy existing between the Stomach and all parts of the body emetics in order to obtain the influence capable of being exerted by that organ are frequently prescribed and are often highly useful.

If the hepatic secretion be but imperfectly performed or vitiated or if a large quantity of bile be contained in the liver an emetic may be salutary in restoring such a condition of things. Its action may be furthermore salutary in restoring the lost balance of the

circulation when the blood becomes congested in the abdominal viscera.

By attracting to the surface the capillaries are acted upon and thus being excited they unload the congestion by unloading the large vessels in the interior.

We are seldom however permitted to use cuppings on account of their being so frequently present more or less symptoms which contraindicate their use. But if there be no great tenderness about the stomach — no inflammatory action in the arterial system and if the stomach is found to be loaded with a vitiated secretion their use is generally rewarded with great and undoubted benefit

The depleting measures which I have spoken of are continued and

persevered in so long as they are demanded by the urgency of the symptoms, while the intervals between their administration are occupied by the administration of cold acidulated or neutral drinks.

In order to guard still further against organic injury as well as to assist materially in breaking up the fever it has been the custom of those who have treated the cases that have come under my observation as well as many of those which I have ~~been~~ attended to make use of Diaphoretics in company with diluent drinks -

By this means a sweat more or less profuse is produced - diminishing the exacerbation and aiding essentially in establishing a more decided remission - during which stage the sine qua non - Sulphate of

Quinine is administered, in two or five grain doses according as the period to the next exacerbation may be considered to be more or less remote.

This will generally continue in preventing the return of the next paroxysm and in effectually establishing a complete remission which we regard as a stage of Convalescence.

During this stage the common practice is to continue the use of the Quinine four or five times a day until several periods shall have passed by in the history of the disease for the appearance of another paroxysm.

This is an outline of the course of treatment proven by experience and observation to be successful in those uncomplicated cases of

the Autumnal Fever of Dorchester County.

But there are many cases in which these therapeutical means - alone and unaided would be found to be unavailing - It was not my object however when I commenced this dissertation to speak particularly or in any manner of such cases and I have no desire now since I have already extended my remarks beyond a degree I little suspected,

I will therefore conclude by merely adding that I hope the time is not far distant when other diseases to which the human family are liable will become as much under the control of medical art as the one of which I have been treating - That all our remedial agents may be as exact in their applications and as uniformly successfull.

And I look I trust with a proud

satisfaction to such a result. For in the language of Proff Bartlett Many Ministers and Interpreters of nature faithful to their high vocation, and competent to its duties are zealously and patiently occupied in endeavoring to accomplish this end. Guided by a sound philosophy; relying upon the one great means of ascertaining the properties and relations of all forms of matter, inorganic and organic. that of observation - they or we their successors may yet find by persevering experiment or fortunate discovery - methods of modifying the living organization - and of correcting its disordered actions which shall give us a much greater control over those diseases than we are now able to exert.